ST Math Texas

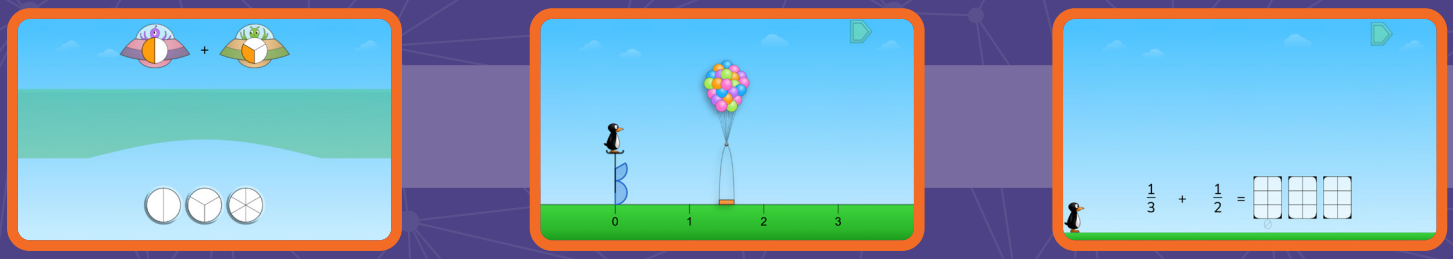
Grade 2

ST Math Practice Book

MIND EDUCATION

TEACHER EDITION

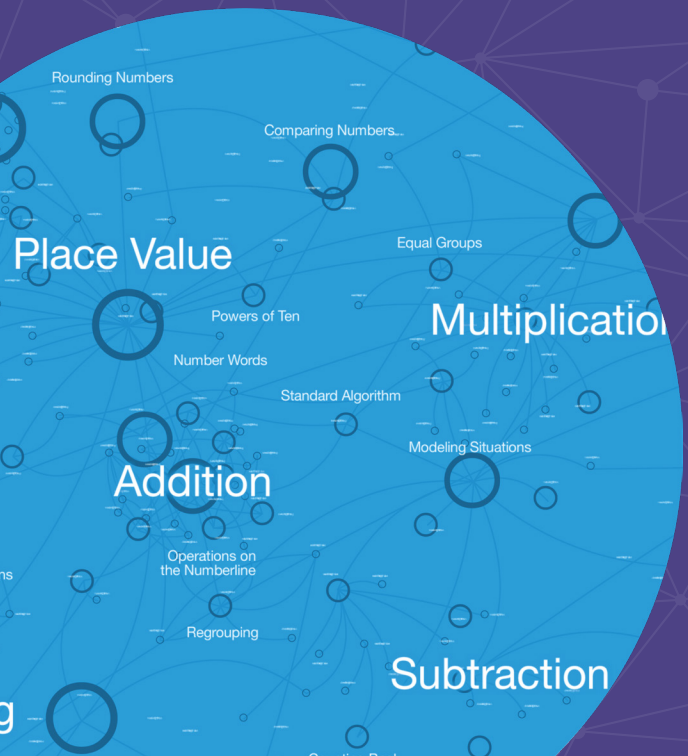
Building Mathematical Progressions Within and Across Grade Levels



Multiple models for every concept within a grade level

Visual-First Learning That Makes Math Click

ST Math Texas is built around a patented visual-first approach that helps students see and understand math. Interactive visuals activate students' spatial-temporal reasoning, building deep understanding even before introducing formal language or procedures.

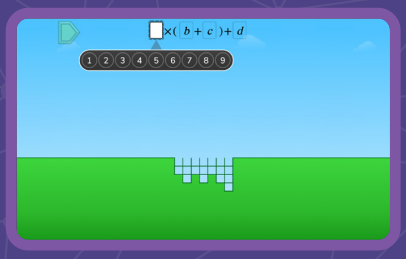


These scaffolded models support problem-solving, strategy sharing, and big-picture thinking—making math feel coherent and connected across and within grade levels.

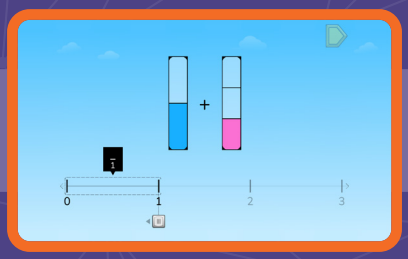
To deepen learning, lessons use multiple representations—visuals, numbers, words, and symbols—helping students form a rich network of ideas they can apply to new problems.

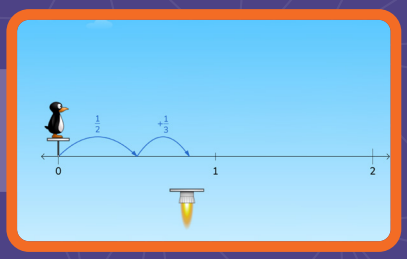
With **ST Math Texas** students go beyond memorization. They develop a connected understanding of math concepts, apply their learning flexibly, and build lasting confidence.

Expressions
Grade 5

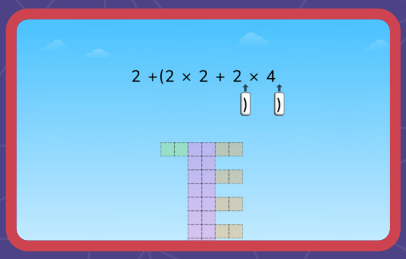


Fractions
Grade 4

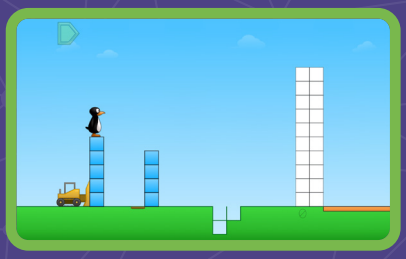




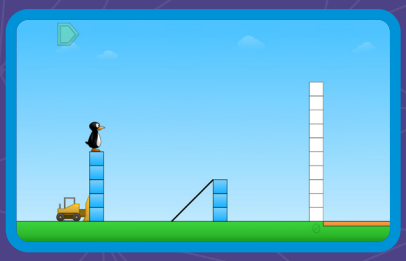
Multiplication
Grade 3



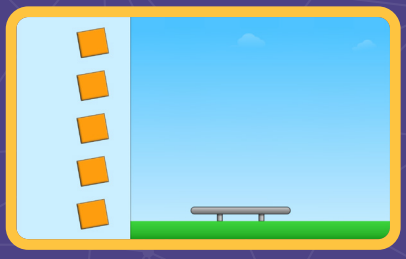
Subtraction
Grade 2



Addition
Grade 1



Counting
Grade K



Connected visual models build in complexity across grade levels

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How to Use This Document

This practice book is a standards-based, year long practice book companion to ST Math Texas.

To use this book in conjunction with ST Math Texas, find the digital games and objectives tied to each Topic. The hyperlinks will take you to the page that allows you to assign the ST Math Texas Objectives that go along with these practice pages.

These pages are designed to be printed and solved with paper and pencil. They come with spiral review, related topics and problems, and world problems that connect to the world around us.

Our help site offers further ties between ST Math, this practice book, and your school or district's curriculum.

Content Overview

Topic 1 (Estimating and Measuring Length) builds a strong understanding of length that students can extend to length models in subsequent topics , including number lines and bar-type graphs in **Topic 2 (Discovering Addition and Subtraction on the Number Line)**, strip diagrams in **Topic 4 (Exploring Addition and Subtraction Within 100)**, and bar graphs in **Topic 7 (Investigating Data)**. These length models support the progressive development of sequential addition and subtraction place value strategies throughout the course. Comparison language and word problems are also carefully introduced in a length context in Topic 1 so that students can both measure and calculate differences, which prepares students to apply length models abstractly to problem-solving in subsequent topics .

While topics 1 and 2 lay a foundation for students in length measurement and length models, they also give students the opportunity to cement fluency with addition and subtraction within 20. They explore the use of models and strategies within this familiar number range before extending to greater number ranges in topics 3–6. **Topics 3 (Discovering Place Value Strategies)** and 4 (Exploring Addition and Subtraction Within 100) focus on addition and subtraction within 100, as students come into grade 2 with a firm understanding of the place value structure within 100. These topics leverage that place value understanding to develop place value strategies for addition and subtraction. **Topic 5 (Extending Place Value to 1,200)** extends their place value understanding to 1,200, which allows for an extension of addition and subtraction strategies to problems within 1,000 in **Topic 6 (Extending Addition and Subtraction to 1,000)**.

The final four topics of the course provide avenues for synthesizing learning and consolidating skills through relevant contextual opportunities. **Topic 7 (Investigating Data)** utilizes data contexts for a wide variety of problem-solving combined with rigorous interpretation of the mathematics in context. **Topic 8 (Counting in Groups)** relies on a strong foundation in addition and subtraction, which has been built over the course of the year, to introduce the idea of equal groups and repeated addition, paving the road for formal multiplication early in grade 3. The idea of counting in groups is revisited in **Topic 9 (Building Financial Literacy)**, during which students apply their understanding of skip counting and equal groups to determine the value of sets of coins. This thinking about equal groups culminates in **Topic 10 (Exploring Shapes and Time)**, when students apply the same concept to equal parts of shapes. Telling time is viewed through the lens of equal parts of the clock face, giving students the opportunity to synthesize their understanding of many course concepts, including equal groups, partitioning shapes, skip counting, and modeling.

Topic 1: Estimating and Measuring Length

ST Math Objectives: Measurement, Addition and Subtraction with Measurement, Two-Step Situations

TEKS: 2.1.A 2.1.B 2.1.C 2.1.D 2.1.E 2.1.F 2.1.G 2.4.C 2.9.A 2.9.B 2.9.D 2.9.E

ELPS: 1.A 1.D 1.E 1.F 2.B 2.C 2.E 2.F 3.A 3.B 3.E 3.F 3.G 3.H 4.D 4.E

Topic 2: Discovering Addition and Subtraction on the Number Line

ST Math Objectives: The Number Line to 1,200, Operations on the Number Line, Addition and Subtraction Situations

TEKS: 2.1.A 2.1.B 2.1.C 2.1.D 2.1.E 2.1.F 2.1.G 2.10.A 2.10.B 2.10.C 2.2.C 2.2.D 2.2.E 2.2.F 2.4.A 2.4.B 2.4.C 2.4.D 2.7.C 2.9.C

ELPS: 1.A 1.B 1.C 1.D 1.E 2.B 2.C 2.D 2.E 2.F 3.A 3.B 3.H 4.D 4.E

Topic 3: Discovering Place Value Strategies

ST Math Objectives: Place Value to 1,200, Two-Digit Addition and Subtraction, Adding and Subtracting Tens and Hundreds

TEKS: 2.1.A 2.1.B 2.1.C 2.1.D 2.1.E 2.1.F 2.1.G 2.2.A 2.2.D 2.2.F 2.4.A 2.4.B 2.4.C 2.7.B 2.7.C 2.9.C

ELPS: 1.A 1.B 1.E 2.A 2.B 2.C 2.D 2.E 2.F 3.A 3.B 3.H 4.D 4.E 4.F

Topic 4: Exploring Addition and Subtraction Within 100

ST Math Objectives: Addition and Subtraction Situations within 100, Two-Digit Addition and Subtraction, One Hundred as a Unit

TEKS: 2.1.A 2.1.B 2.1.C 2.1.D 2.1.E 2.1.F 2.1.G 2.2.D 2.4.A 2.4.B 2.4.C 2.4.D 2.7.C

ELPS: 1.A 1.F 2.B 2.C 2.D 2.E 2.F 3.B 3.C 3.H 4.D 4.E

Topic 5: Extending Place Value to 1,200

ST Math Objectives: Place Value to 1,200, Place Value Bundles to 1000, Comparing Three-Digit Numbers

TEKS: 2.1.B 2.1.C 2.1.D 2.1.E 2.1.F 2.1.G 2.2.A 2.2.B 2.2.C 2.2.D 2.2.E 2.2.F 2.7.B 2.9.C

ELPS: 1.A 1.C 1.E 1.F 2.A 2.C 2.D 2.E 2.F 3.B 3.C 3.D 3.F 3.G 3.H 4.A 4.B 4.D 4.E

Topic 6: Extending Addition and Subtraction to 1,000

ST Math Objectives: Model Addition and Subtraction within 1000, Adding and Subtracting Tens and Hundreds, Two-Step Situations

TEKS: 2.1.A 2.1.B 2.1.C 2.1.D 2.1.E 2.1.F 2.1.G 2.2.D 2.2.E 2.4.B 2.4.C 2.4.D 2.7.B 2.7.C

ELPS: 1.A 1.C 1.D 1.E 2.B 2.C 2.D 2.E 2.F 3.A 3.D 3.F 3.G 3.H 4.D 4.E 4.F

Topic 7: Investigating Data

ST Math Objectives: Creating Graphs, Comparing Three-Digit Numbers, Skip Counting

TEKS: 2.1.A 2.1.B 2.1.C 2.1.D 2.1.E 2.1.F 2.1.G 2.10.A 2.10.B 2.10.C 2.10.D 2.2.D 2.4.C

ELPS: 1.A 1.B 1.C 1.E 1.F 2.A 2.B 2.C 2.D 2.E 2.F 3.B 3.C 3.E 3.G 3.H 4.A 4.B 4.C 4.D 4.E 4.F

Topic 8: Counting in Groups

ST Math Objectives: Skip Counting, Rows and Columns, Even and Odd Numbers

TEKS: 2.1.B 2.1.C 2.1.D 2.1.E 2.1.F 2.1.G 2.10.A 2.10.B 2.10.D 2.4.A 2.6.A 2.6.B 2.7.A 2.9.F

ELPS: 1.A 1.B 1.E 2.B 2.E 2.F 3.B 3.F 3.G 3.H 4.D 4.E

Topic 9: Building Financial Literacy

ST Math Objectives: Using Money, Money Place Value, Two-Step Situations

TEKS: 2.1.A 2.1.B 2.1.C 2.1.F 2.1.G 2.11.A 2.11.B 2.11.C 2.11.D 2.11.E 2.11.F 2.4.B 2.5.A 2.5.B K.1.A

ELPS: 1.A 1.B 1.C 1.E 2.B 2.D 2.E 2.F 3.B 3.E 3.H 4.C 4.D 4.F

Topic 10: Exploring Shapes and Time

ST Math Objectives: Shapes, Time, Partitioning into Equal Shares

TEKS: 2.1.A 2.1.B 2.1.C 2.1.D 2.1.E 2.1.F 2.1.G 2.3.A 2.3.B 2.3.C 2.3.D 2.8.A 2.8.B 2.8.C 2.8.D 2.8.E 2.9.D 2.9.G

ELPS: 1.A 1.E 2.B 2.C 2.D 2.E 3.B 3.C 3.D 3.F 3.G 3.H 4.C 4.D 4.E 4.F

Topic 1

Estimating and Measuring Length

Recommended ST Math Objectives:

Measurement
Addition and Subtraction with Measurement
Two-Step Situations

Name: Date:

Measuring Length with Nonstandard Units

1. 53 = 5 tens and 3 ones

   47 = 4 tens and 7 ones

2. Use > , = , or < .

   25 < 51

3. Draw a line that you think is 7 units. Measure your line with unit cubes to check your work.

4. There are 3 bracelets of different lengths. The purple bracelet is shorter than the red bracelet. The pink bracelet is longer than the red bracelet. Which is longer: the purple bracelet or the pink bracelet? Explain your thinking.

   Pink

   Possible answer:

   The pink bracelet is longer because it is longer than the red bracelet, which is longer than the purple bracelet.

Name: _____ Date: _____

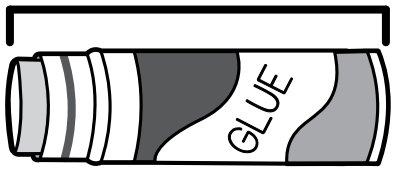

Arman

Measuring Length with Two Different Units

① $40 + 8 =$ **48** $80 + 8 =$ **88**

② $6 + 2 =$ **2** $+ 6$

③ Use inch tiles to measure the length of the glue stick.



about **2** in

④ Arman measured the lengths of 13 objects with inch tiles, and he measured the lengths of 4 objects with centimeter cubes. How many more objects did Arman measure with inch tiles than centimeter cubes? Write an equation to support your answer.

9 more objects

13 – 4 = 9

Name: _____ Date: _____

Exploring the Inverse Relationship of Length Units

① $8 + 2 + 4 =$ **14** $3 + 7 + 1 =$ **11**

② $9 - 3 =$ **6** $6 - 0 =$ **6**

③ The pencil is about 6 inches long.

a) Will the number of centimeters be greater or less than 6?

greater **less**

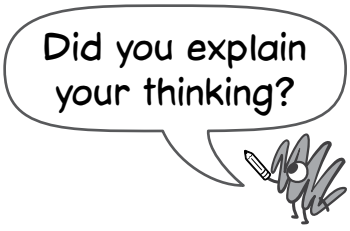
b) How many centimeters long is the pencil? about **15** cm

④ Arman measured the length of a marker using inch tiles.
Vivi measured the same marker using centimeter cubes.
Did Arman or Vivi use more units? Explain your thinking.

Vivi

Possible explanation:

Vivi used more units because centimeter cubes are smaller than inch tiles, so it takes more of them to measure the length of the marker.



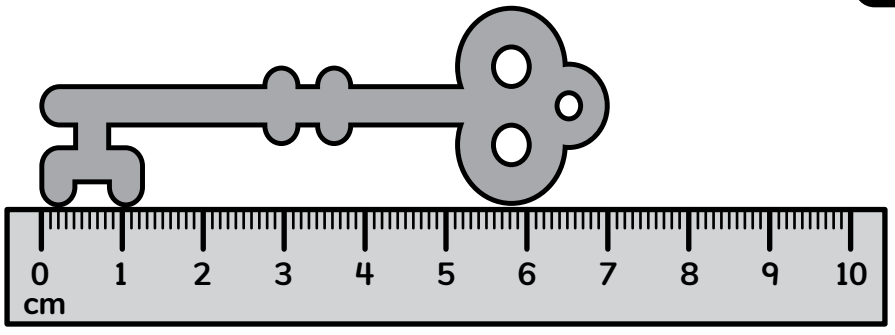
Name: _____ Date: _____

Introducing the Ruler to Measure Length

① $6 = \boxed{8} - 2$ $\quad\quad$ $4 + \boxed{3} = 7$

② $\boxed{28} = 20 + 8$ $\quad\quad$ $11 - 10 = \boxed{1}$

③ How many centimeters long is the key? about **7** cm

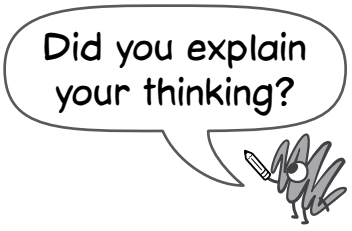


④ Vivi and her grandma are making a new quilt. Vivi cut a piece of fabric that is 12 inches long. Her grandma cut a piece of fabric that is 12 centimeters long. Who cut the shorter piece of fabric? Explain your thinking.

Vivi's grandma

Possible explanation:

Her grandma cut the shorter piece of fabric because centimeters are smaller than inches.



Name: _____ Date: _____


Arman

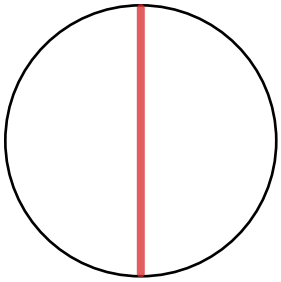
Using a Ruler with Missing Labels

1. Use > , = , or < .

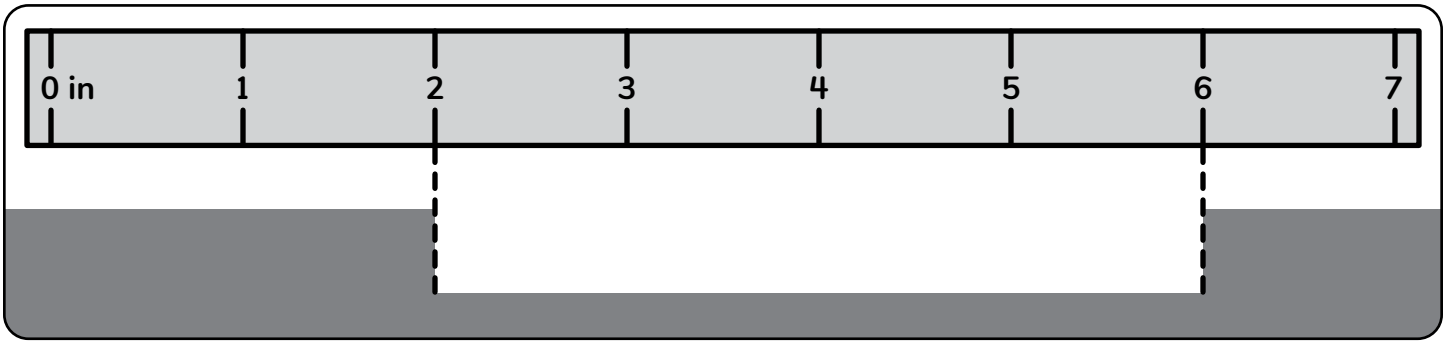
7 tens and 4 ones **>** 7 tens and 2 ones

2. Partition the circle into two halves.

Possible answer:



3. How many inches long is the gap? **4** inches

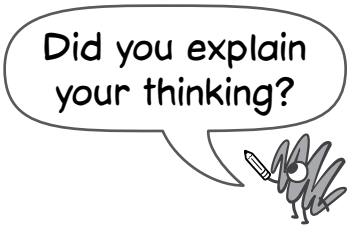


4. Arman wants to measure the lengths of some classroom materials when he notices that his ruler has broken. If the ruler now begins at 2 inches instead of 0 inches, can Arman still measure the lengths of classroom materials? Explain your thinking.

Yes

Possible explanation:

He can start at 2 instead of 0 and count up to measure.



Name: _____ Date: _____


Arman

Measuring Length with Centimeter Units

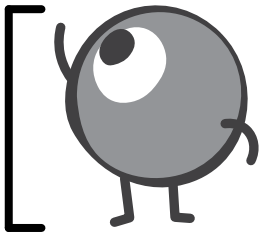
1. There are 4 red crayons, 8 blue crayons, and 3 yellow crayons. How many crayons are there?

   15 crayons

2. $10 - 3 =$ ***7*** $\qquad$ ***7*** $+ 3 = 10$

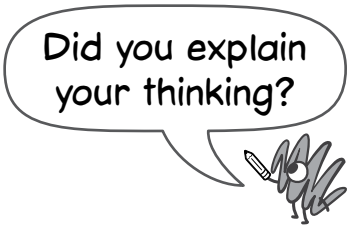
3. How many centimeters tall do you think the critter is? Use a ruler to measure the height of the critter.

   about ***3*** cm



4. The first penguin Arman measured was 8 inches tall. The second penguin he measured was taller than the first penguin. How many inches tall could the second penguin be? Explain your thinking.

   Student answers will vary.



Name: _____ Date: _____


Arman

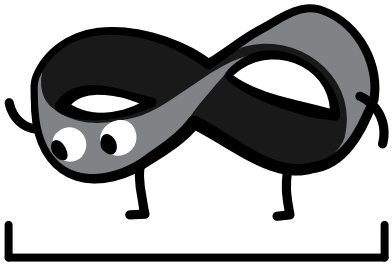
Measuring Length with Inch Units

① $15 = \boxed{19} - 4$ $\quad\quad$ $14 + \boxed{6} = 20$

② $8 + 6 = 6 + \boxed{8}$

③ Use a ruler to measure the length of the critter in inches.

about **2** in

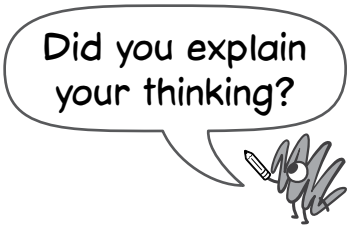


④ Arman said he measured an object in his desk that measured 5 inches long. Do you think the object is a marker or an eraser? Explain your thinking.

Marker

Possible explanation:

An eraser is smaller than 5 inches.



Name: _____ Date: _____

Using Benchmarks to Estimate Length

1. Circle the shortest JiJi.

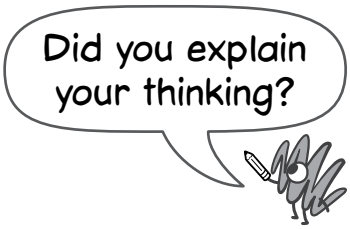
2. What numbers come after 47?

47, **48**, **49**, **50**, **51**

3. Arman measured the length of his laptop. It is 12 units long. Did Arman measure using inches or centimeters? Explain your thinking.

Inches

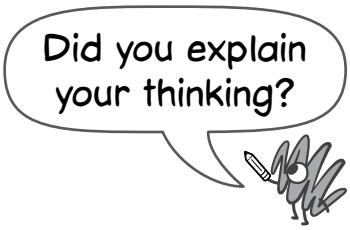
Student explanations will vary.



4. Vivi says she measured the length of her brand new crayon and found that it was about 9 units long. Did Vivi measure in centimeters or inches? Explain your thinking.

Centimeters

Student explanations will vary.



Name: _____ Date: _____


Arman

Introducing the Yardstick and Meter Stick to Measure Length

1. Will you need more centimeter cubes or more inch tiles to measure the length of the pencil?

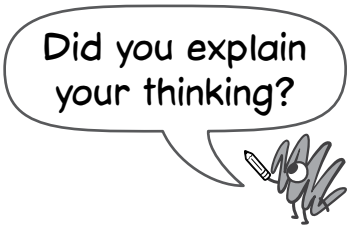
centimeter cubes

2. $3 + \boxed{8} = 11$ $\quad\quad$ $11 - 3 = \boxed{8}$

3. A baby emperor penguin is 5 inches tall. Would you use a ruler, meter stick, or yardstick to measure its height? Explain your thinking.

A ruler

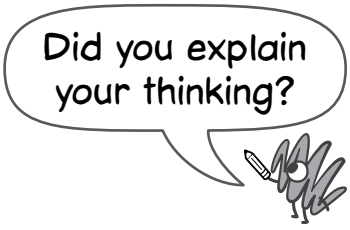
Student explanations will vary.



4. Arman wants to measure the length of the caterpillar he found on the playground. Should he use a ruler, a meter stick, or a yardstick to measure its length? Explain your thinking.

A ruler

Student explanations will vary.

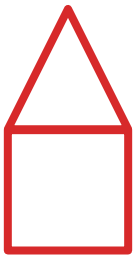


Name: _____ Date: _____

Choosing Units and Tools to Measure Length

1. Draw a picture that puts a square and a triangle together.

Possible answer:



2. 87 is 8 tens and 7 ones. What is another way to make 87?

Possible answer:

7 tens and 17 ones

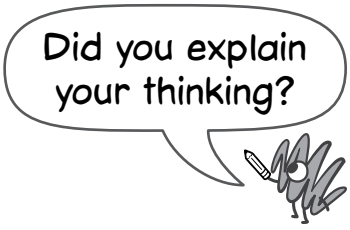
3. Which unit would you use to measure the length of an ant? Explain your thinking.

inches **feet** **centimeters** **meters**

Centimeters

Possible explanation:

The other units are too large.

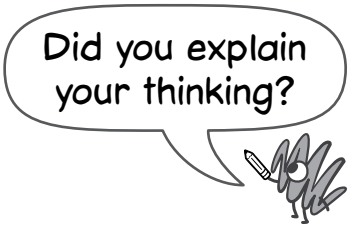


4. Vivi says that she can measure the length of a hallway in inches, but that measuring the hallway in feet would be faster. Do you agree or disagree? Explain your thinking.

Agree

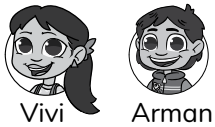
Possible explanation:

Feet are larger units than inches. It would be faster to measure the hallway in feet because there would be fewer units to count.



Name: _____ Date: _____

Solving Equalize Word Problems Involving Length



1. Fill in the missing digits to make the statement true.

Possible answer:

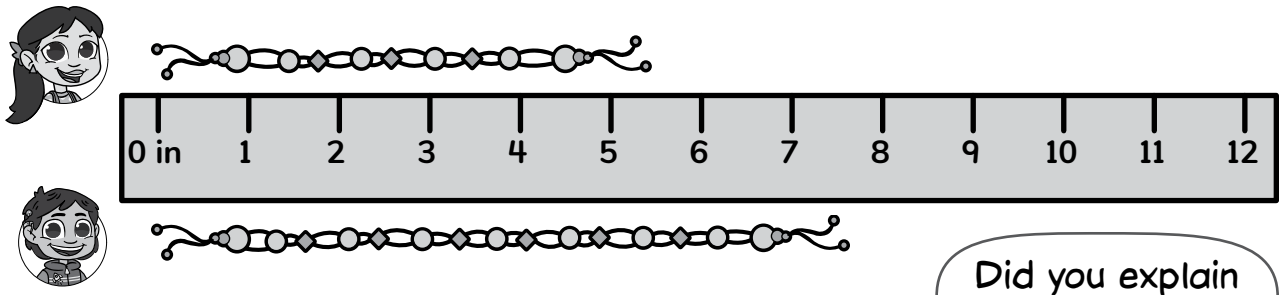
$2 < \boxed{1}\boxed{1}$

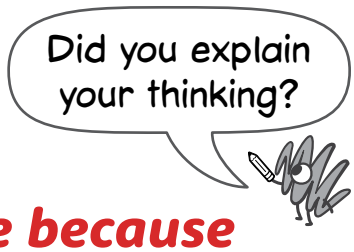
Possible answer:

$47 > \boxed{4}\boxed{9}$

2. $52 = 50 + \boxed{2}$

3. Who has the longer necklace, Vivi or Arman? Explain your thinking.





Arman

Possible explanation:

Arman has the longer necklace because 7 inches is longer than 5 inches.

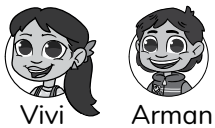
4. Arman made 9 necklaces for his friends. Vivi made 5 necklaces for her family. How many necklaces did they make altogether? Write an equation to support your answer.

14 necklaces

9 + 5 = 14

Name: _____ Date: _____

Solving Difference-Unknown Comparison Word Problems Involving Length

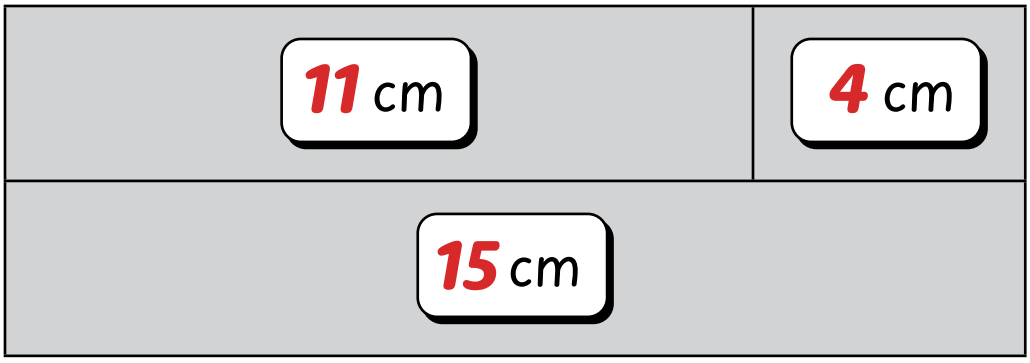


① $50 + 7 =$ **57**

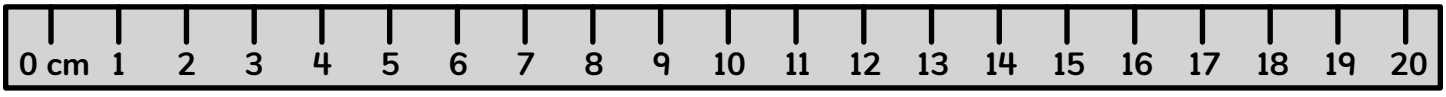
② $17 -$ **9** $= 8$

③ Use the strip diagram to help you solve the problem.

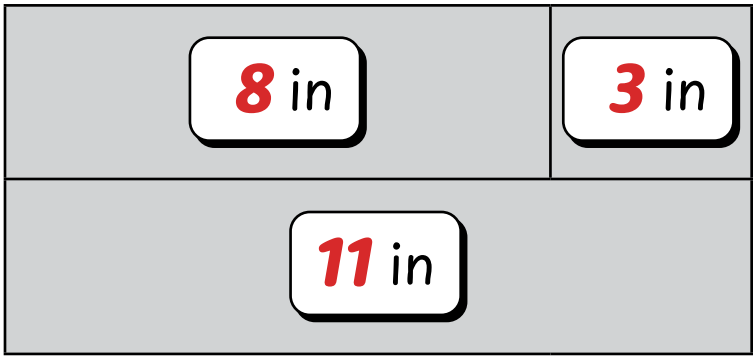
a) Vivi's bracelet is 15 cm long. Arman's bracelet is 11 cm long.
How much longer is Vivi's bracelet than Arman's?



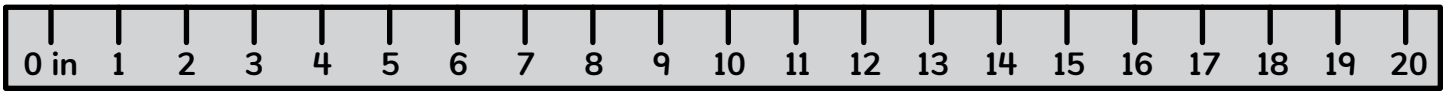
Vivi's bracelet is 4 centimeters longer than Arman's.



b) Vivi made a necklace that is 8 inches long.
Arman made a necklace that is 11 inches long.
How much shorter is Vivi's necklace than Arman's?



Vivi's necklace is 3 inches shorter than Arman's.



Name: _____ Date: _____

Solving Greater-Unknown Comparison Word Problems Involving Length

1. Circle the equations that are true.

18 – 9 = 10 + 1

16 – 8 = 4 + 4

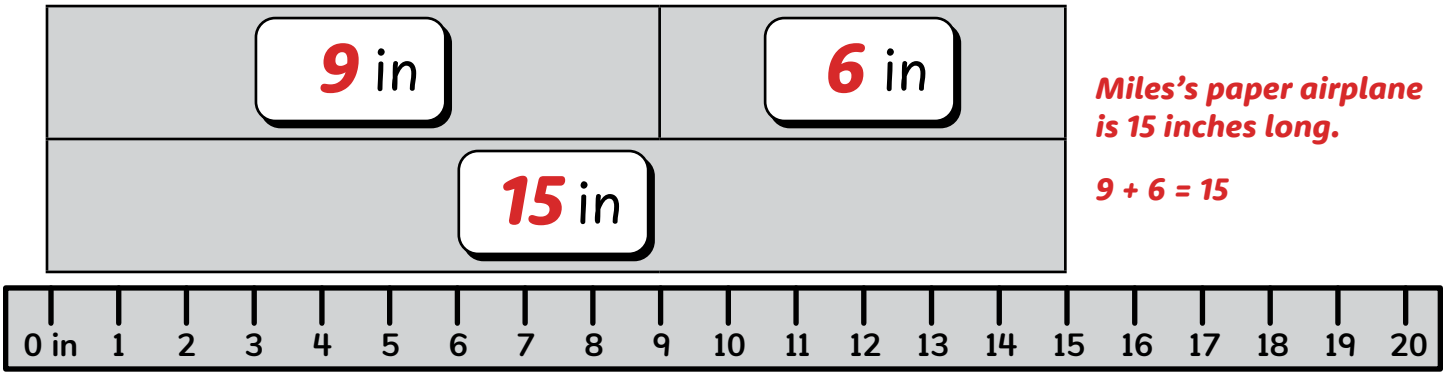
3 + 7 = 15 – 5

2. Fill in the missing number to make the equation true.

$8 + \boxed{2} + 3 = 10 + 3$

3. Use the strip diagram to help you solve the problem. Write an equation to support your answer.

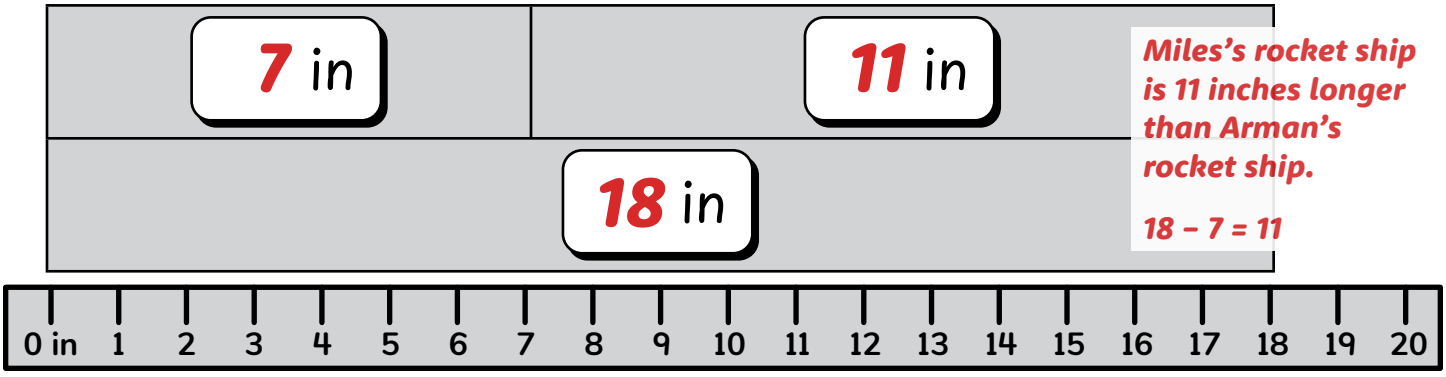
a) Arman built a paper airplane that is 9 inches long. Miles's paper airplane is 6 inches longer than Arman's. How long is Miles's paper airplane?



Miles's paper airplane is 15 inches long.

9 + 6 = 15

b) Miles's rocket ship is 18 inches long. Arman's rocket ship is 7 inches long. How much longer is Miles's rocket ship?



Miles's rocket ship is 11 inches longer than Arman's rocket ship.

18 – 7 = 11

Name: _____ Date: _____

Solving Lesser-Unknown Comparison Word Problems Involving Length

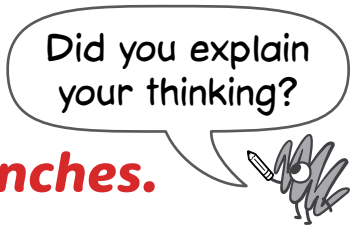
① $15 - \boxed{7} = 8$ $18 = 13 + \boxed{5}$

② Will you need more inches or more centimeters to measure the length of your desk? Explain your thinking.

Centimeters

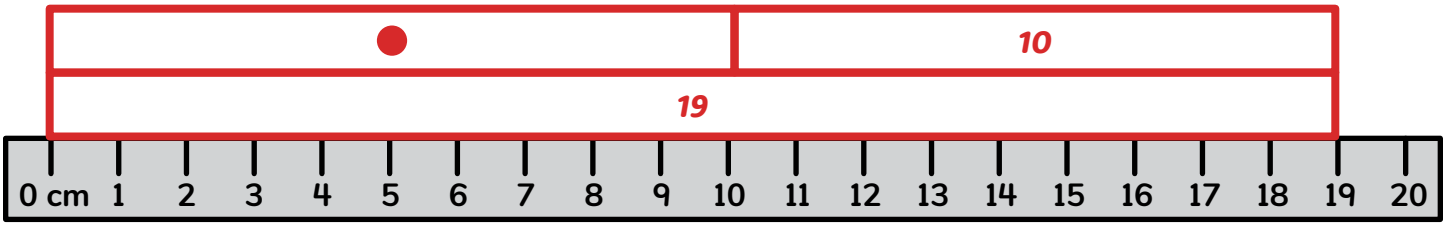
Possible explanation:

Centimeters are smaller units than inches.



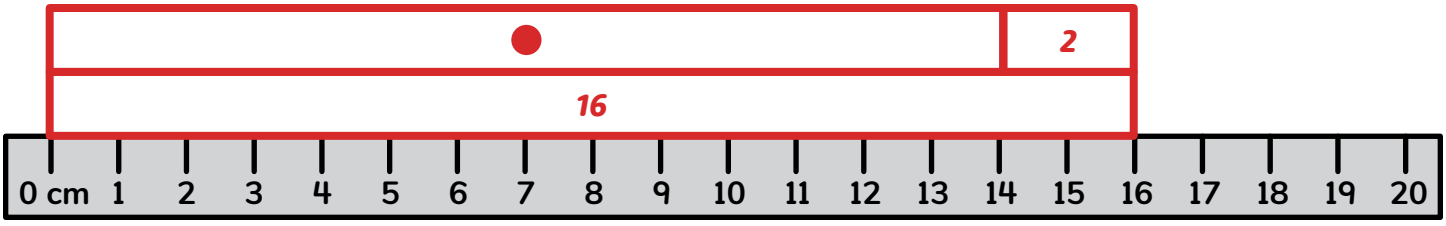
③ The pencil is 19 cm long. The crayon is 10 cm shorter than the pencil. How long is the crayon? **9 cm**

Create a simple drawing of the crayon showing its length. Write an equation to support your answer. **19 – 10 = 9**



④ The paintbrush is 2 cm longer than the marker. If the paintbrush is 16 centimeters long, how long is the marker? **14 cm**

Create a simple drawing of the crayon showing its length. Write an equation to support your answer. **16 – 2 = 14**



Topic 2

Discovering Addition and Subtraction on the Number Line

Recommended ST Math Objectives:

The Number Line to 1,200
Operations on the Number Line
Addition and Subtraction Situations

Name: _____ Date: _____

Using Number Paths to Compare and Order Numbers

1. a) What is 10 more than 37? **47**

   b) What is 10 less than 63? **53**

2. 30 + 5 = **35**

3. Complete the number path.

95	96	**97**	**98**	**99**	**100**	**101**	**102**	103	**104**

4. A critter wrote down a mystery number. The mystery number is greater than 43 but less than 50. What could the mystery number be?

   Possible answer:

   47

Name: _____ Date: _____


Miles

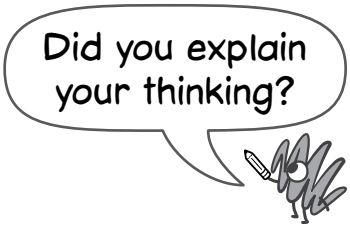
Transitioning from a Number Path to a Number Line

① $18 - \boxed{9} = 9$ $\qquad$ $15 = 7 + \boxed{8}$

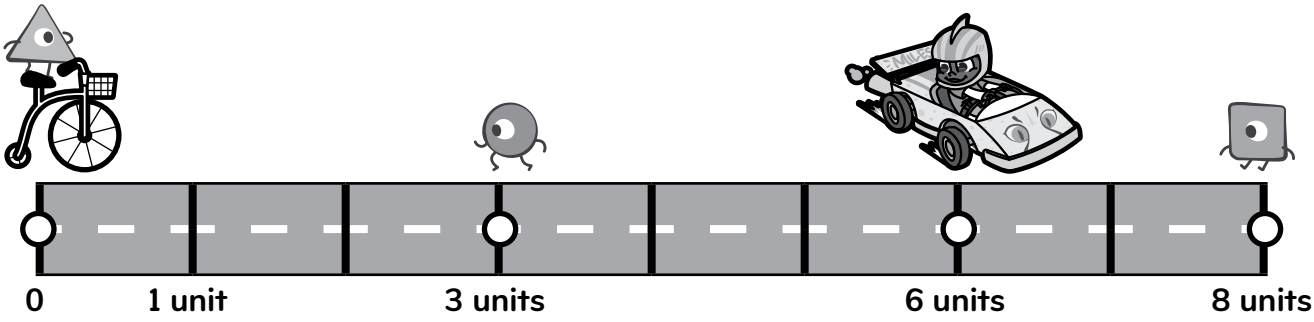
② Would you rather use a ruler or a yardstick to measure the height of the classroom door? Explain your thinking.

A yardstick.

Student explanations will vary.



③ How far is  from Miles's car? $\boxed{6 \text{ units}}$



④ Miles has 11 toy cars in his room. 3 toy cars are yellow. The rest are blue. How many toy cars are blue? Write an equation to support your answer.

8 toy cars are blue. $\qquad$ ***11 – 3 = 8***

Name: _____ Date: _____

Introducing the Number Line

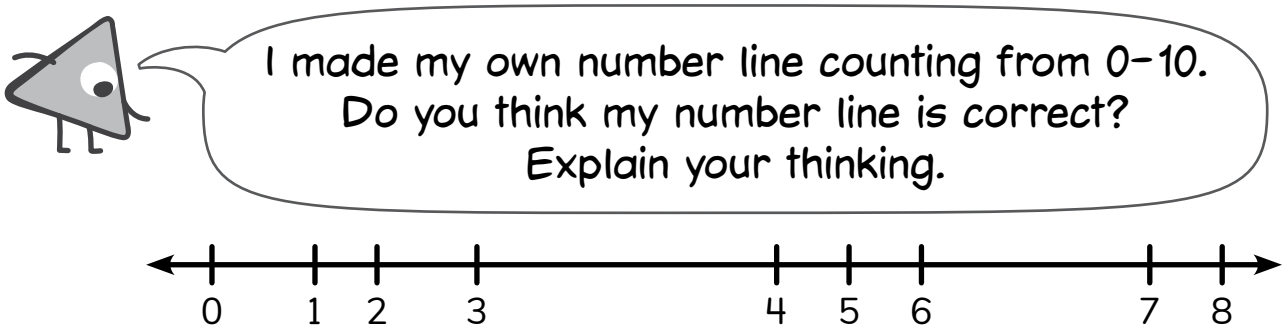
1. Use > , = , or < .

$20 + 3$ **<** $30 + 2$

2. Which unit would you use to measure the length of your pencil?

inches **feet**

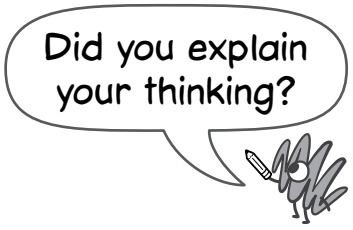
3.



No

Possible explanation:

The spacing between each tick mark is unequal.



4. Vivi needs to cut 6 pieces of string for bracelets and 13 pieces of string for necklaces. How many pieces of string does Vivi need to cut in all? Write an equation to support your answer.

19 pieces of string ***6 + 13 = 19***

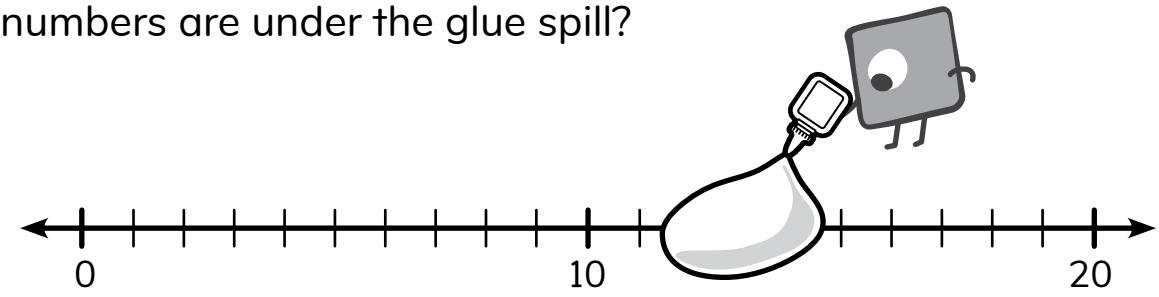
Name: Date:

Finding Numbers on a Number Line

① $18 - 10 =$ **8**

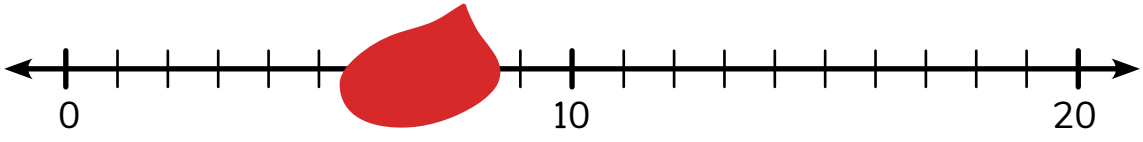
② $50 + 6 =$ **56**

③ What numbers are under the glue spill?



12, 13, 14

④ Oh no! A critter spilled glue on the tick marks for numbers 6, 7, and 8 on the number line! Draw a glue spill on the number line to match the story.



Name: Date:

Using Estimation to Find Numbers on a Number Line

1. What number comes after 19?

20

What number comes after 50?

51

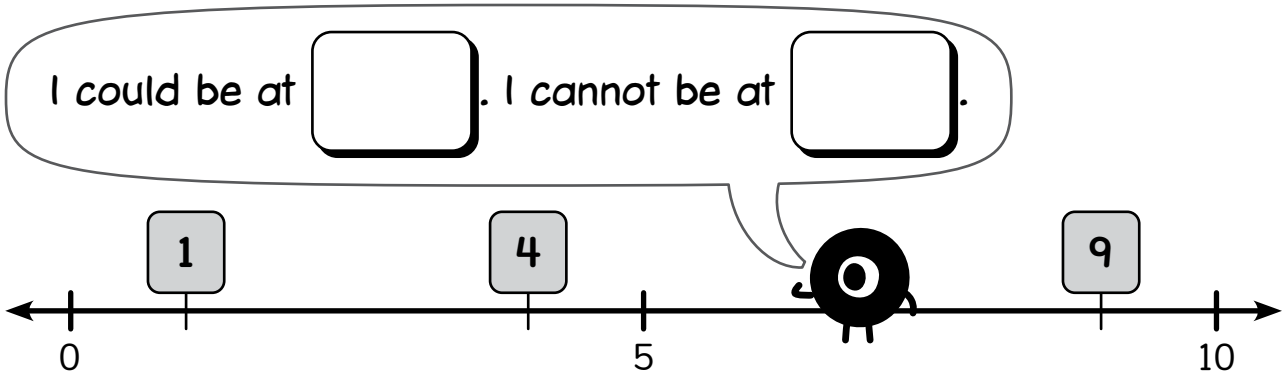
2. A pencil is 7 inches long. An eraser is 4 inches long. How much longer is the pencil? Write an equation to support your answer.

3 inches

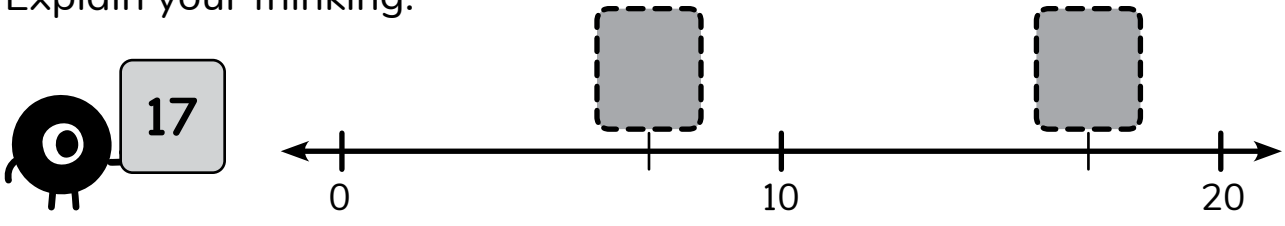
7 – 4 = 3

Student answers will vary.

3.

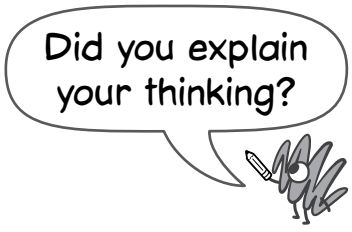


4. Where should the critter place its card on the number line? Explain your thinking.



In the second box.

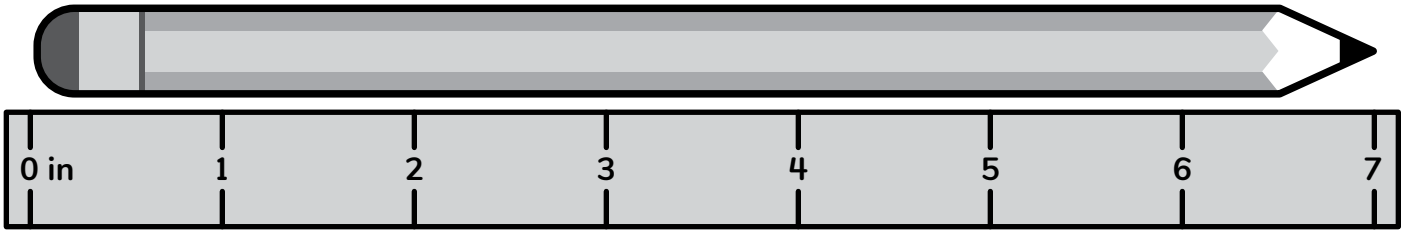
Student explanations will vary.



Name: Date:

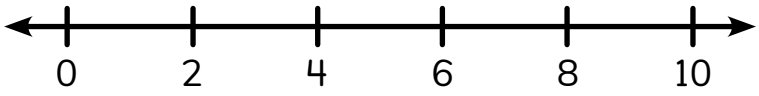
Analyzing Number Lines to Fix Mistakes

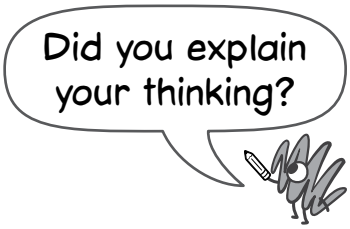
1. Measure the length of the pencil. about **7 in**



2. $4 + 8 + 6 =$ **18**

3. Is this a number line? Explain your thinking.





Yes

Possible explanation:

This number line is counting by twos and has equal spaces between the tick marks.

4. A critter made a 0–10 number line that had a mistake.
Draw what the number line could look like and explain the mistake.

Student drawings and answers will vary.

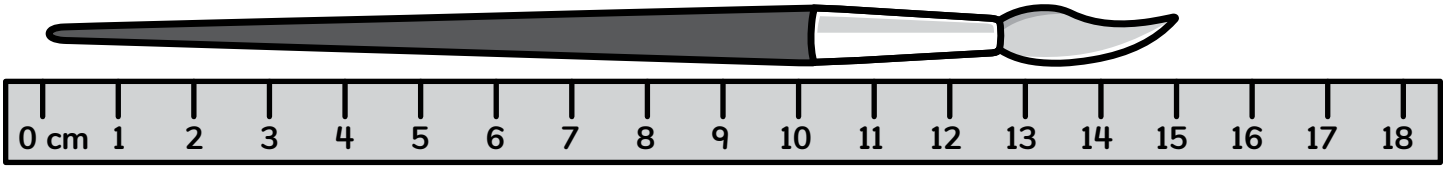
Name: _____ Date: _____


Miles

Using Number Lines to Model Addition and Subtraction Situations

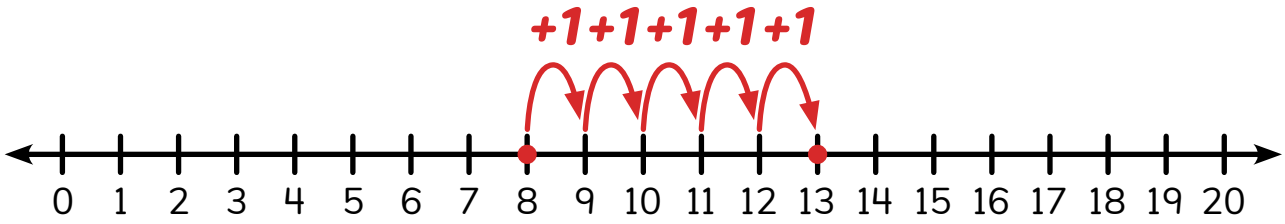
1. 13 is **1** ten and **3** ones.

2. The paintbrush is about **15** centimeters long.



3. $8 + 5 =$ **13**

Show your thinking on the number line.



4. Miles read 9 pages in his book on Tuesday. He read 4 fewer pages on Wednesday. How many pages did Miles read on Wednesday? Write an equation to support your answer.

Miles read 5 pages on Wednesday.

9 – 4 = 5

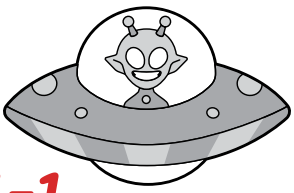
Name: _____ Date: _____

Using Number Lines to Add and Subtract Result-Unknown Word Problems Within 20

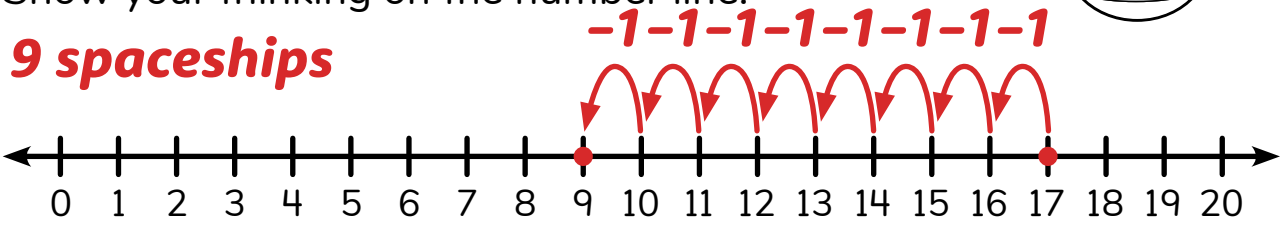
1. $12 - 5 =$ **7** **7** $+ 5 = 12$

2. $4 + 7 =$ **11** $2 + 8 =$ **10** $3 + 6 =$ **9**

3. Arman had 17 spaceships. He lost 8 spaceships. How many spaceships does Arman have now? Show your thinking on the number line.



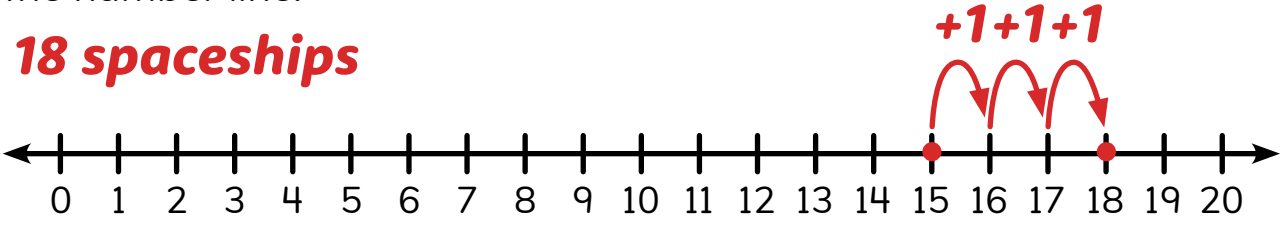
9 spaceships



Write an equation to support your answer. **17** **−** **8** = **9**

4. Aarifa started with 15 spaceships. She captured 3 more spaceships. How many spaceships does she have now? Show your thinking on the number line.

18 spaceships



Write an equation to support your answer. **15** **+** **3** = **18**

Name: _____ Date: _____

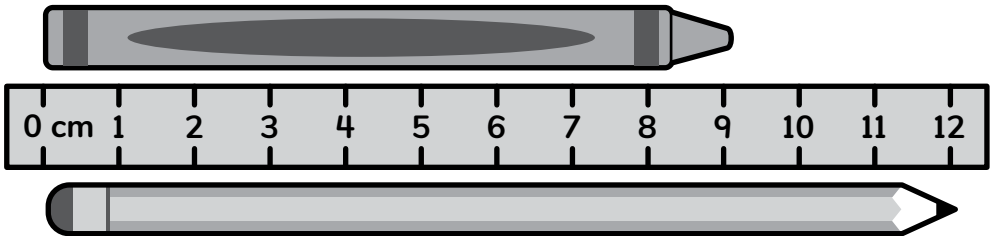

Arman

Using Number Lines to Add Change-Unknown Word Problems Within 20

1. If I start at the number 8 and count 5 more, what number will I say?

$8 + 5 =$ **13**

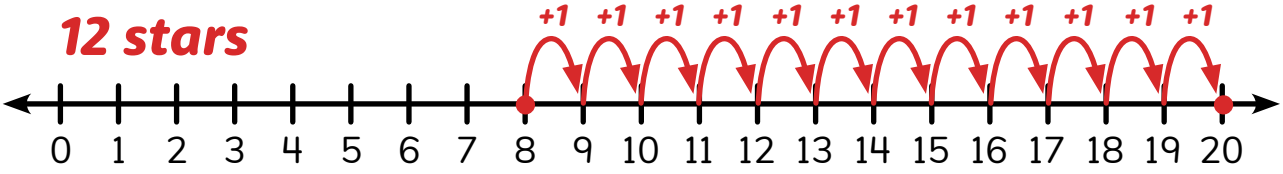
2. The pencil is about **3 cm** longer than the crayon.



3. Show your thinking on the number line.

a) Arman is on the last level of his video game! He started the game with 8 starts. Then he collected some more stars. Now he has 20 star stars. How many stars did Arman collect?

12 stars

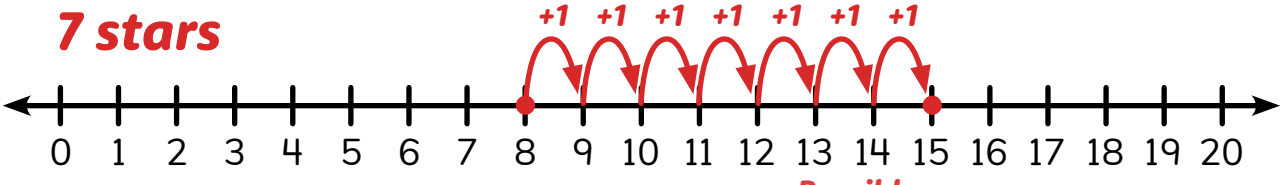


Write an equation to support your answer.

Possible answer: **8** + **12** = **20**

b) Arman played the hardest level of his video game. He started the level with 8 stars. He finished the level with 15 stars. How many stars did Arman collect on the hardest level?

7 stars



Write an equation to support your answer.

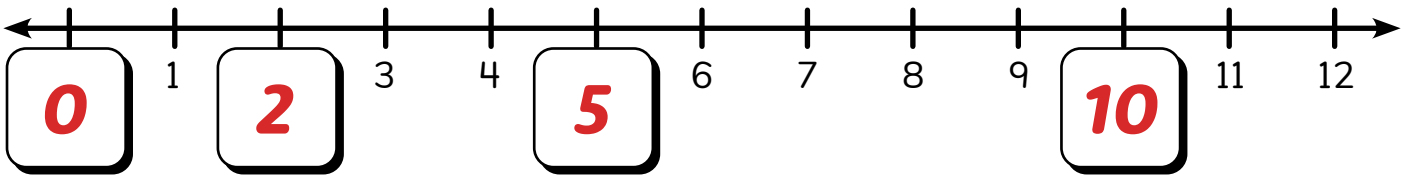
Possible answer: **8** + **7** = **15**

Name: Date:

Using Number Lines to Subtract Change-Unknown Word Problems Within 20

① $14 - 9 =$ **5**

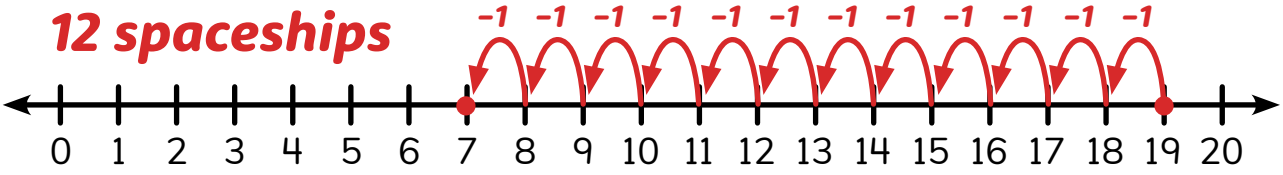
② Complete this number line by filling in the blank tick marks with the missing numbers.



③ Show your thinking on the number line.

a) There were 19 spaceships. Some spaceships flew to the moon. Now there are only 7 spaceships. How many spaceships flew to the moon?

12 spaceships



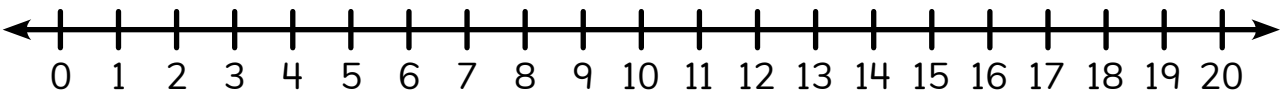
Write an equation to support your answer.

Possible answer: **19** − **7** = **12**

b) There were 15 spaceships. Some spaceships went to get more fuel. Now there are 12 spaceships. How many spaceships went to get fuel?

3 spaceships

Student models will vary.



Write an equation to support your answer.

Possible answer: **15** − **3** = **12**

Name: _____ Date: _____


Miles

Relating Number Lines to Bar-Type Graphs

1. $90 + 9 =$ **99**

2. Would you rather measure the length of the playground in centimeters or meters? Explain your thinking.

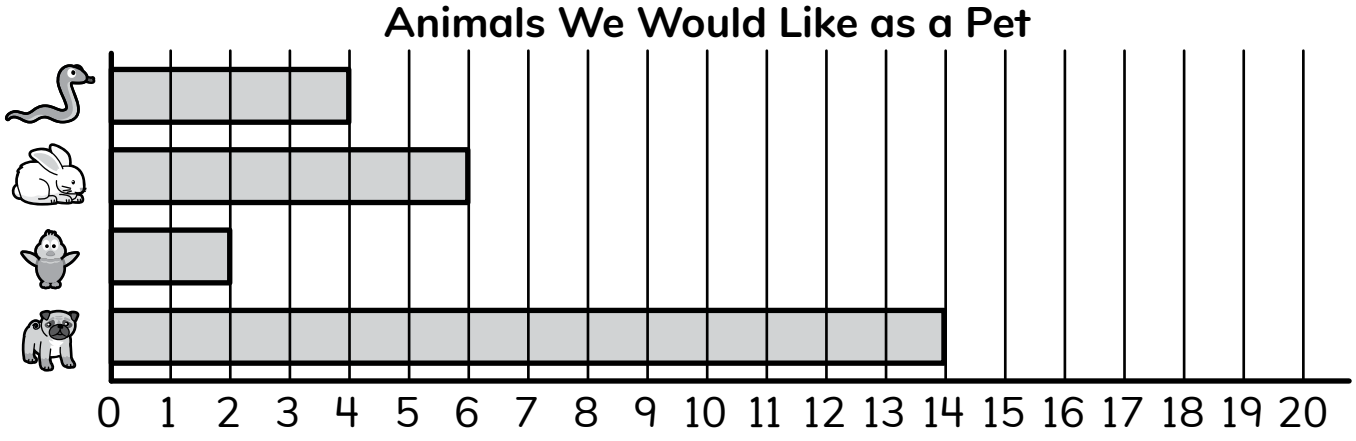
Meters

Possible explanation:
It will take fewer meters to measure the playground.

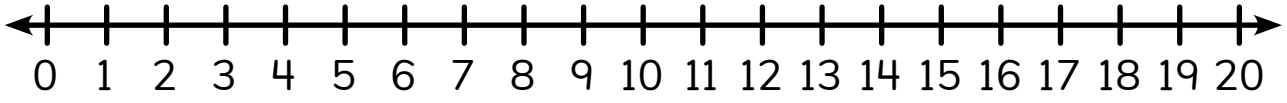
3. How many fewer students choose  than  ?

2 fewer students

Show your work on the number line.



Student models will vary.



4. Miles asked his classmates to pick their favorite subject in school. 4 fewer classmates picked reading than math. If 12 students picked math, how many students picked reading? Write an equation to support your answer.

Possible equation:

8 students picked reading.

12 – 4 = 8

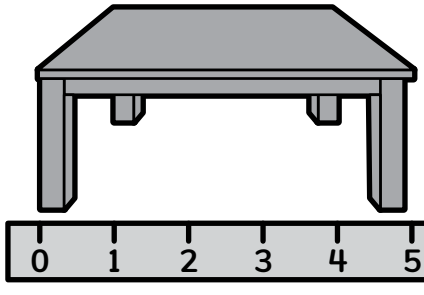
Name: _____ Date: _____


Miles

Using Number Lines to Find the Difference

① $2 = \boxed{9} - 7$

② Measure the length of the table.

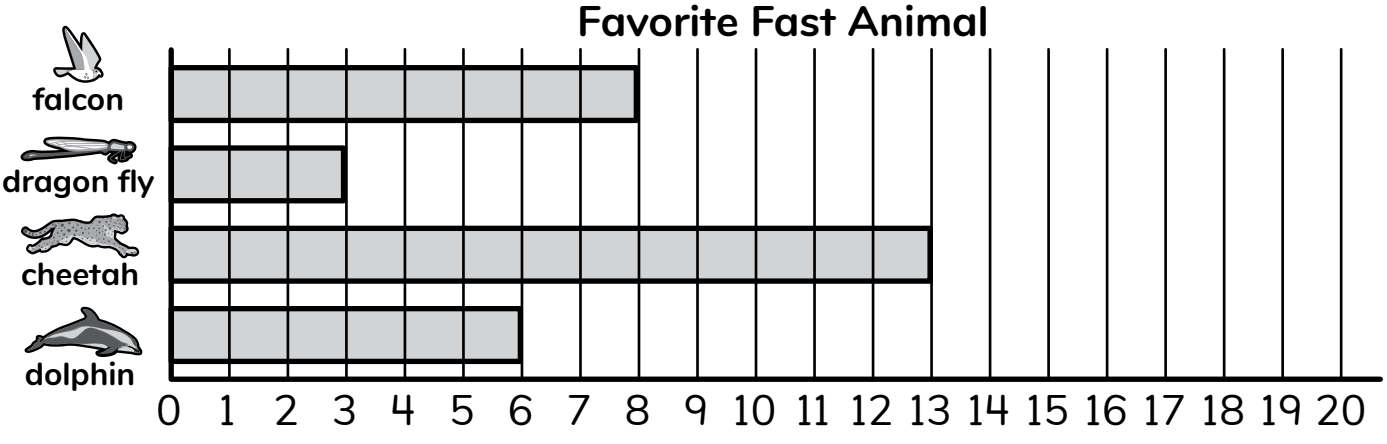


about **5** ft

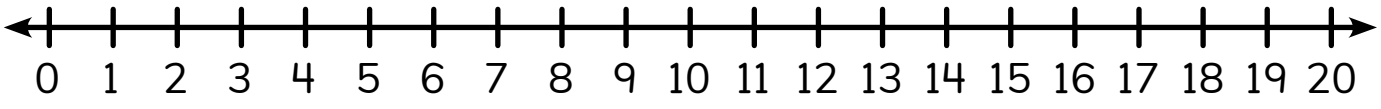
③ How many more students chose  cheetah than  dragon fly?

Show your work on the number line.

10 more students chose  cheetah.



Student models will vary.



④ Miles asked his classmates to choose their favorite birds. 9 more students chose eagles than owls. If 4 students chose owls, how many students chose eagles as their favorite bird? Write an equation to support your answer.

13 students chose eagles.

Possible equation:
4 + 9 = 13

Name: _____ Date: _____


Aarifa

Using Number Lines to Complete a Bar-Type Graph

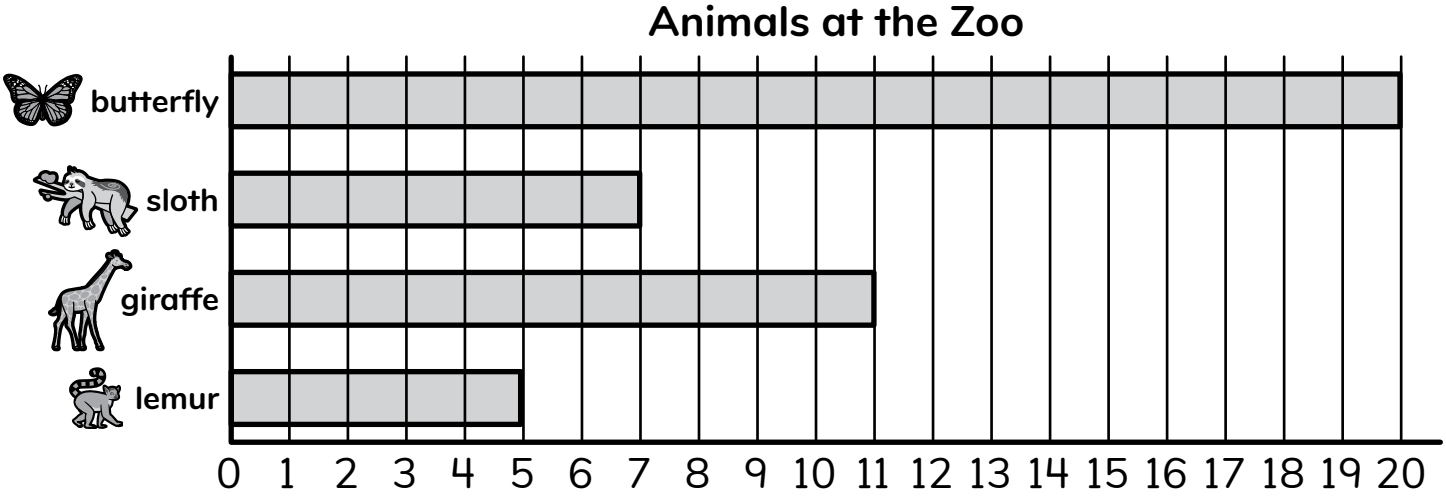
1. Use >, <, or =.

20 + 9 **>** 10 + 9

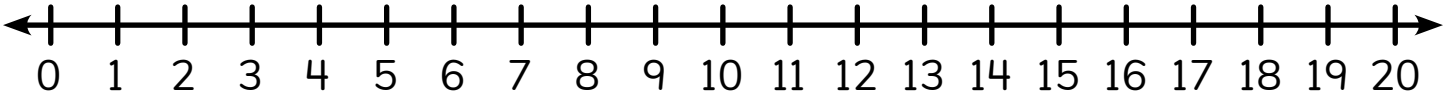
2. 50 + 7 = **57**

3. How many more sloths are there than lemurs at the zoo? Show your work on the number line.

2 more sloths



Student models will vary.



4. Aarifa counted reptiles at the zoo. There were 6 fewer alligators than snakes on exhibit. If there are 4 alligators on exhibit, how many snakes did Aarifa see? Write an equation to support your answer.

10 snakes

Possible equation:

4 + 6 = 10

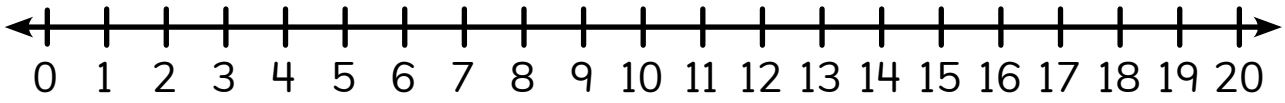
Name: _____ Date: _____

Using Number Lines to Model and Solve Additive Comparison Word Problems

1. Use the number line to complete the equation.

$6 + \boxed{12} = 18$

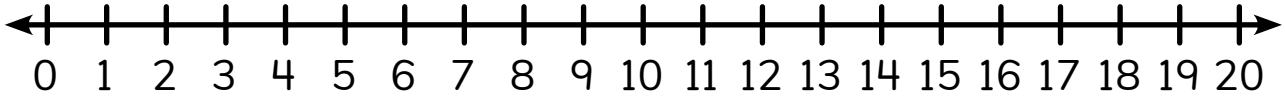
Student models will vary.



2. An adult giraffe is about 15 **inches** / **feet** tall.

3. 13 seal pups were sitting on the beach. 6 seal pups were swimming in the water. How many more seal pups were sitting on the beach? Show your work on the number line.

Student models will vary.



7 more seal pups were sitting on the beach.

4. There were 9 giraffe calves eating leaves. There were 4 fewer giraffe calves laying in the sun. How many giraffe calves were laying in the sun? Write an equation to support your answer.

5 giraffe calves were laying in the sun.

Possible equation:
9 – 4 = 5

Topic 3

Discovering Place Value Strategies

Recommended ST Math Objectives:

Place Value to 1,200
Two-Digit Addition and Subtraction
Adding and Subtracting Tens and Hundreds

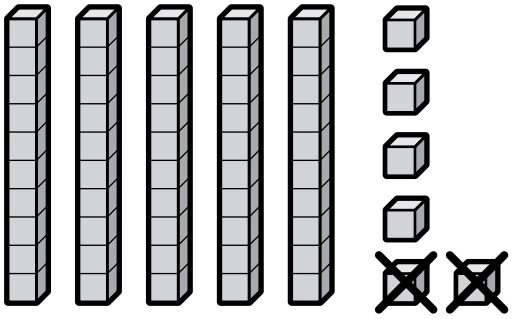
Name: Date:

Adding and Subtracting Groups of 10 or 1 from Two-Digit Numbers

1. What are three numbers greater than 85?

Possible answers: **111** **93** **106**

2. Circle the expression that matches the model.



5 – 1 – 1

56 – 10 – 10

56 – 1 – 1

3. Complete the equations.

68 + 10 + 10 = **88**

1 + 1 + 1 + 24 = **27**

97 = 47 + 10 + 10 + 10 + 10 + 10

4. Are the hidden addends 1s or 10s? Explain how you know.

72 + ☁ + ☁ = 74

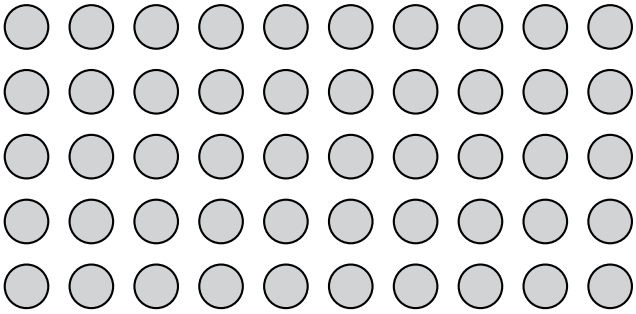
1s because the digit in the ones changed but the digit in the tens place stayed the same

Name: Date:

Adding and Subtracting Multiples of 10 or 1 from Two-Digit Numbers

1. How many dots?

Show how you know.

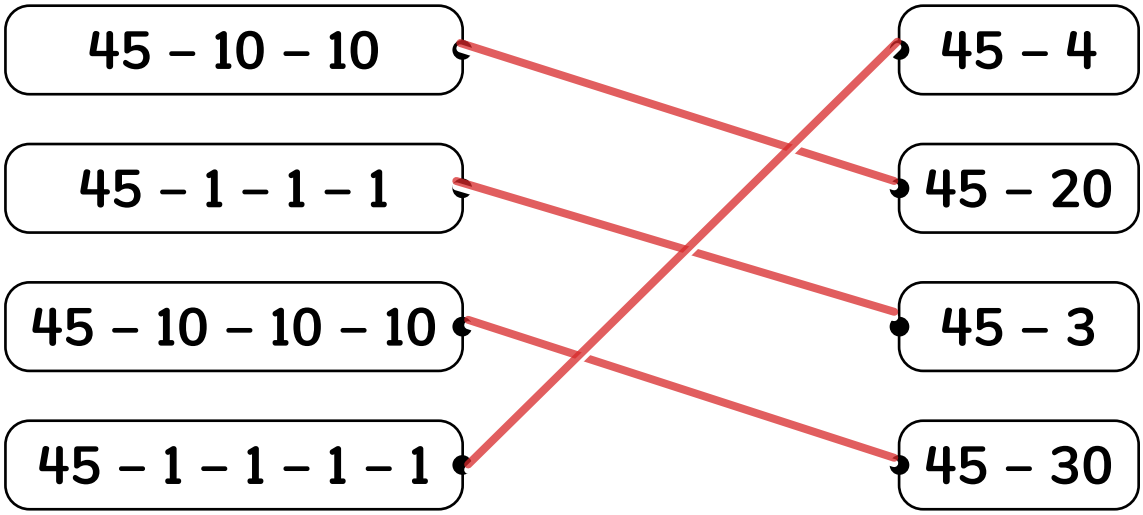


Possible answers:

Circling groups of 2/5/10 at a time

50 dots

2. Draw a line to connect expressions that match.



3. Circle the expression you would prefer to solve and explain why.

57 + 40

23 + 10 + 10 + 10 + 10

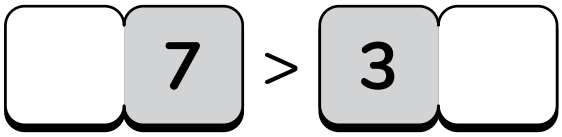
Possible answer:

23 + 10 + 10 + 10 + 10 because that is how I think about it in my head.

Name: _____ Date: _____

Using Number Lines to Compare Numbers

1. Fill in the missing digits to make the comparison true.

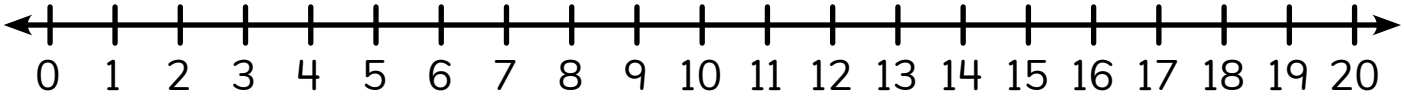


Student answers will vary.

2. Use the number line to complete the equation.

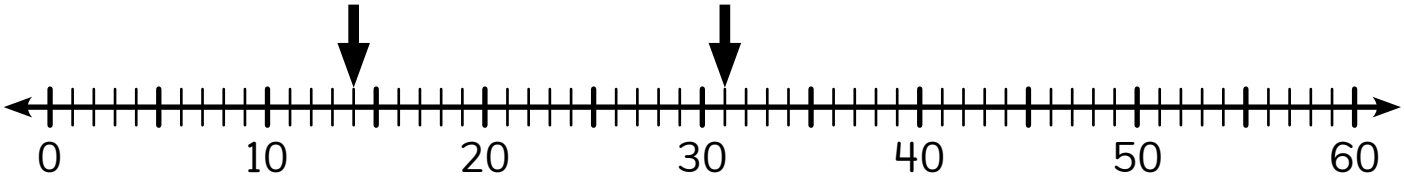
$15 - \boxed{11} = 4$

Student models will vary.



3. Compare the two numbers that the arrows are pointing to.

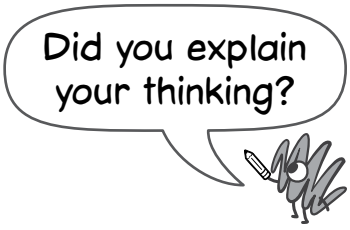
$\boxed{31} > \boxed{14}$



4. Aarifa counted 26 butterflies in the insect exhibit. Miles counted 37 ants in the insect exhibit. Who counted more insects? Explain your thinking.

Miles counted more insects.

Possible explanation:
Miles counted more because 37 is greater than 26.



Name: _____ Date: _____

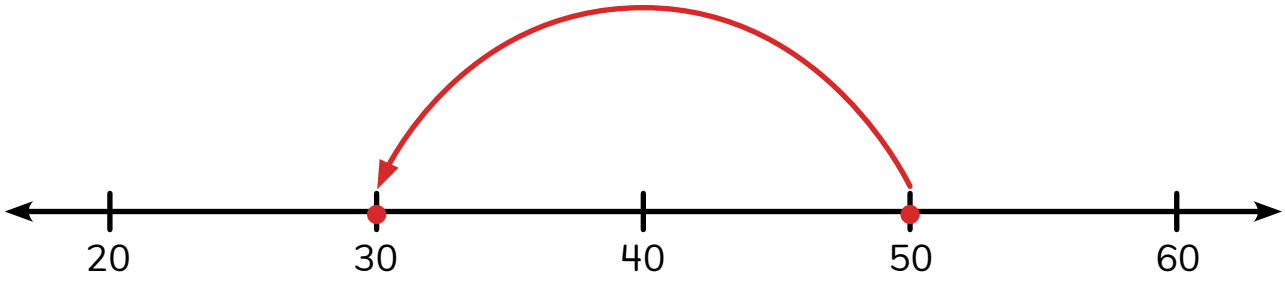
Estimating Numbers on Number Lines to Add and Subtract

1. $30 + 2 =$ **32** $\quad 7 + 40 =$ **47**

2. Miles drew 6 triangles, 3 squares, and 9 circles. How many shapes did Miles draw?

   18 shapes

3. Model the equation on the number line. $50 - 20 =$ **30**



4. Aarifa was playing a video game after school. She earned 20 points on Level 1. She earned 5 fewer points on Level 2. How many points did Aarifa earn on Level 2? Write an equation to support your answer.

   15 points $\quad$ **20 – 5 = 15**

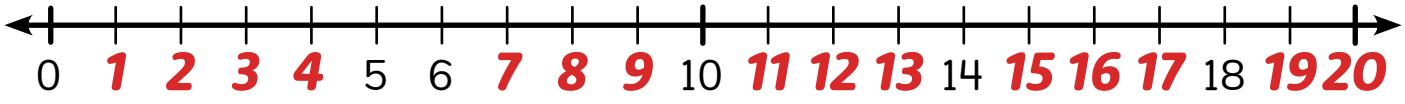
Name: _____ Date: _____

Using Number Lines to Add and Subtract Result-Unknown Word Problems Within 100

1. Fill in the missing number to complete the equation.

$7 + 6 = \boxed{6} + 7$

2. Complete this number line by filling in the blank tick marks with the missing numbers.

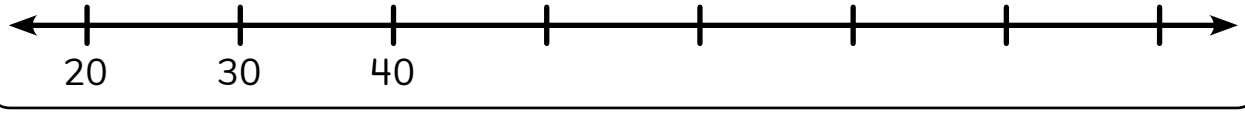


3. Choose one number line to help you model and solve this problem.

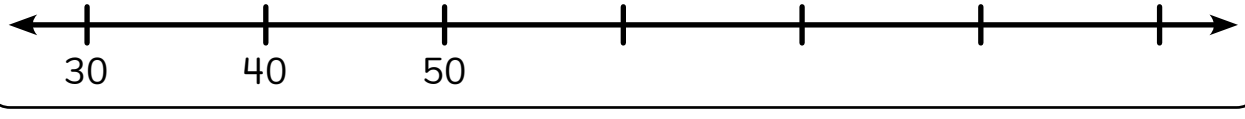
$25 + 50 = \boxed{75}$

Student models will vary.

A

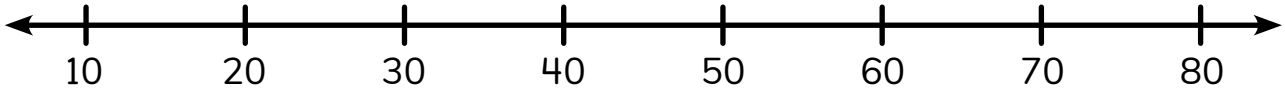


B



4. There were 48 critters in the lunchroom. 30 critters went outside for recess. How many critters are still in the lunchroom? Show your work on the number line.

Student models will vary.



18 critters are still in the lunchroom.

Name: _____ Date: _____

Using Number Lines to Add and Subtract Change-Unknown Word Problems Within 100

1. One way to make 73 is to use **7** tens and **3** ones.

Possible answer:

2. To measure the length of your shoe, would you rather use a ruler or a yardstick? Explain.

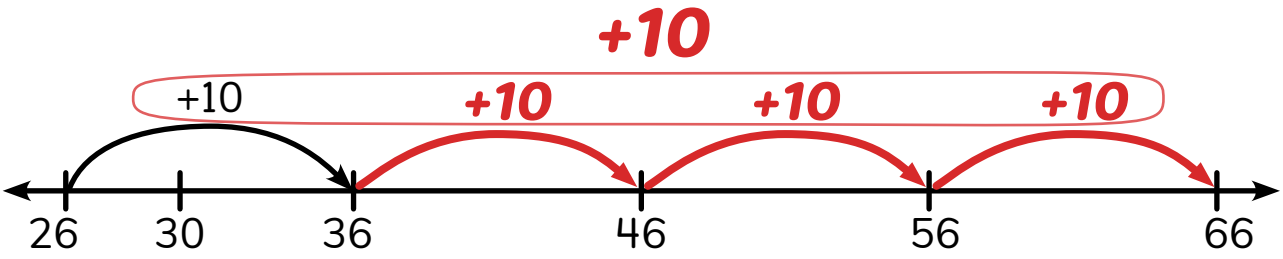
A ruler

Possible explanation:

A yardstick would be too long for measuring a shoe.

3. There are 26 milk cartons in the lunchroom refrigerator. If 66 milk cartons are needed for lunchtime, how many more milk cartons do we need to get? Use the number line to model and solve this problem.

Student models will vary.



40 more milk cartons

4. There are 9 tables in the cafeteria. If we need 15 tables, how many more tables do we need to get?
Write an equation to support your answer.

6 more tables

Possible equation:

9 + 6 = 15

Name: _____ Date: _____

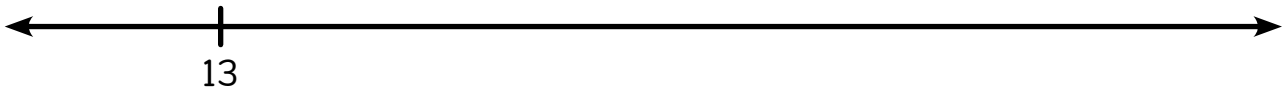
Using Number Lines Flexibly to Model and Solve Addition and Subtraction Word Problems

1. $8 + 6 =$ **14**

2. $42 - 10 =$ **32**

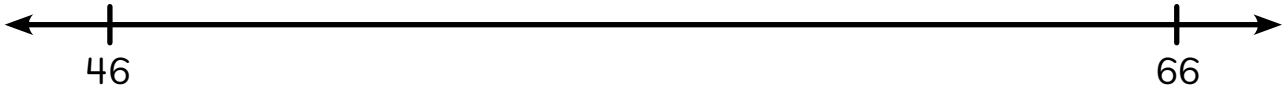
3. What is an equation I can show on this number line?

Student answers will vary.



4. There were 66 spaceships at the space station. Some spaceships flew away. Now there are 46 spaceships at the space station. How many spaceships flew away? Use the number line to model and solve the problem.

Student models will vary.



20 spaceships

Name: _____ Date: _____


Miles

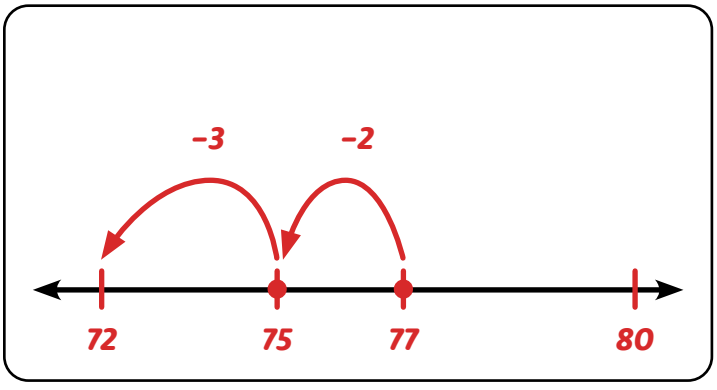
Introducing the Open Number Line

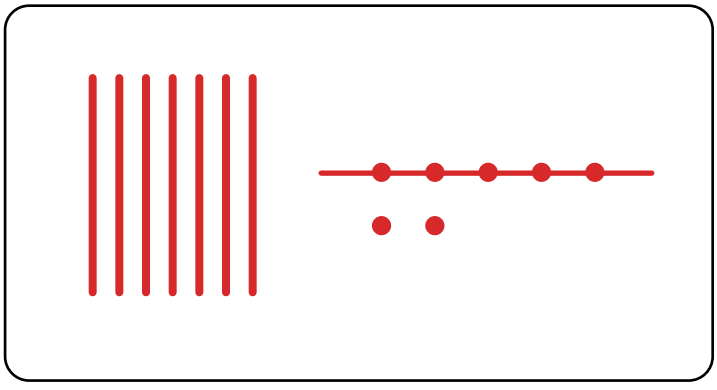
Possible answer:

1. One way to make 41 is **4** tens and **1** ones.

2. 24 + 30 = **54**

3. Solve 2 ways. 77 − 5 = **72** *Student models will vary.*

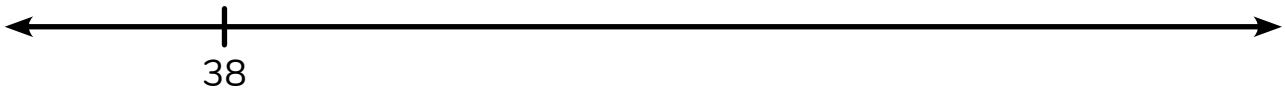




4. Miles has 38 toy trucks in his toy car collection. His neighbors cleaned out their garage and gave Miles 20 more toy trucks they found. Now how many toy trucks does Miles have in his toy car collection? Use the number line to model and solve the problem.

58 toy trucks

Student models will vary.



Name: _____ Date: _____

Arman

Matching Addition and Subtraction Models

① $43 + 20 =$ **63**

② **2** $+ 8 = 10$

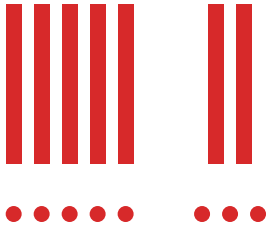
$1 + 9 =$ **10**

$6 +$ **4** $= 10$

③ Create a base ten blocks drawing to solve the equation.

$55 + 23 =$ **78**

Possible drawing:



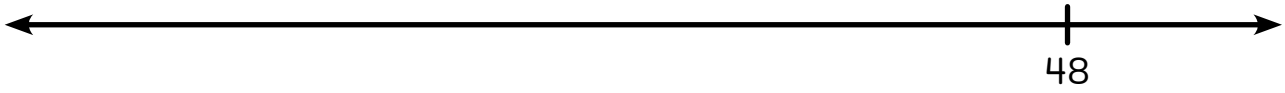
70

8

③ Arman earned 48 points in the first level of a video game. He lost 30 points on the second level of the video game. How many points does Arman have going into level three? Use the number line to model and solve the problem.

18 points

Student models will vary.



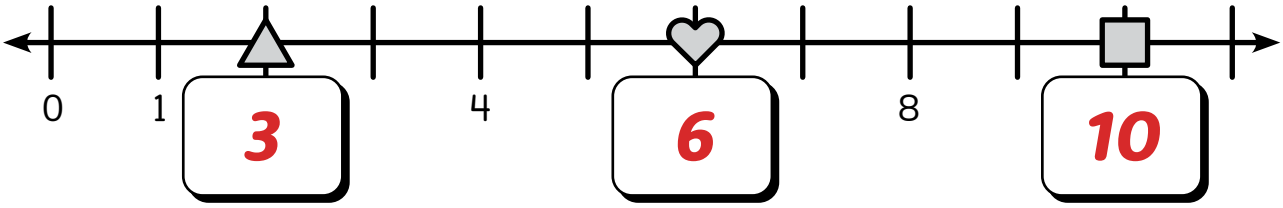
Name: Date:

Reasoning About Place Value to Make Equations True

1. a) What is 10 more than 97? **107**

   b) What is 10 less than 97? **87**

2. What number does each shape represent on the number line?



3. Solve each equation.

   39 – 18 = **21** 42 + 34 = **76**

4. Change 1 digit to make each equation true.

39 – 52 = ~~1~~0

72 – 52 = 20

33 + 22 = 65

Possible answer:

43 + 22=65

33 + 22 = 55

33 + 32 = 65

45 + 50 = 98

Possible answer:

45 + 53 = 98

45 + 50 = 95

48 + 50 = 98

87 – 26 = 51

Possible answer:

77 – 26 = 51

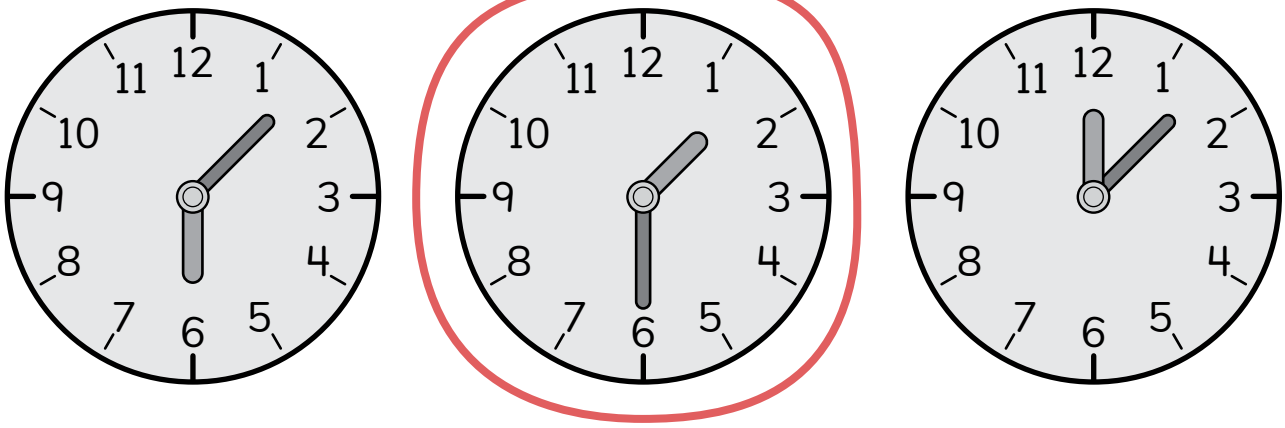
87 – 26 = 61

87 – 36 = 51

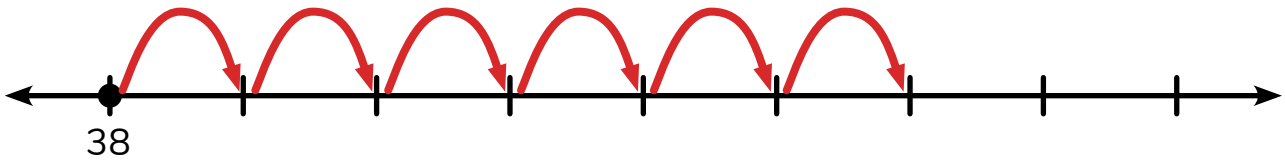
Name: _____ Date: _____

Strategically Adding One-Digit Numbers to Two-Digit Numbers

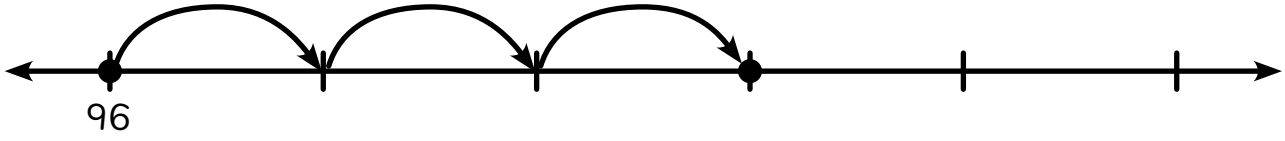
1 Which clock shows half past 1?



3 Use the number line to solve the equation. $6 + 38 =$ **44**



3 Use the number line to solve the equation. $96 +$ **3** $=$ **99**



4 Which addend would you count on from to solve this equation? Explain your thinking. $5 + 36 = ?$

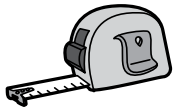
Possible answer:

I would count on from 36 even though it's second because it is the greatest addends and it is [faster/more efficient].

Name: Date:

Using the Make-a-Ten Strategy to Reach a Decade

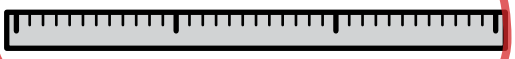
1. Which tool would you use to measure your height?



tape measure

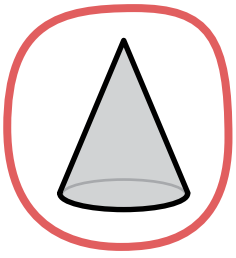
Possible answers:

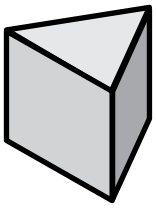
ruler

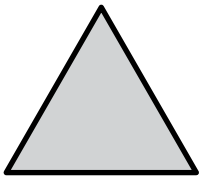


yard stick

2. Which shape is a cone?







3. Which expressions have a sum less than or equal to 60?

8 + 42

69 + 1

96 + 4

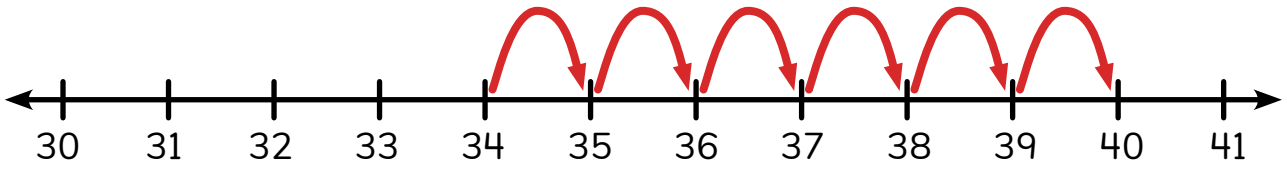
54 + 6

5 + 35

7 + 63

3. What number will make the equation true? 34 + 6 = 40

Use the number line to show how you know!



Name: Date:

Using the Make-a-Ten Strategy to Cross a Decade

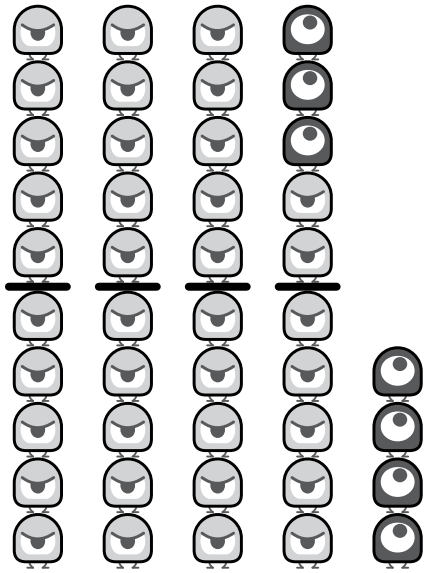
1. What is the total value of this set of coins?

The total is **29¢**.

2. Compare the numbers using >, <, or =.

98 **>** 89

3. Which expression is represented by the model?



Circle your answer.

35 + 5 + 4

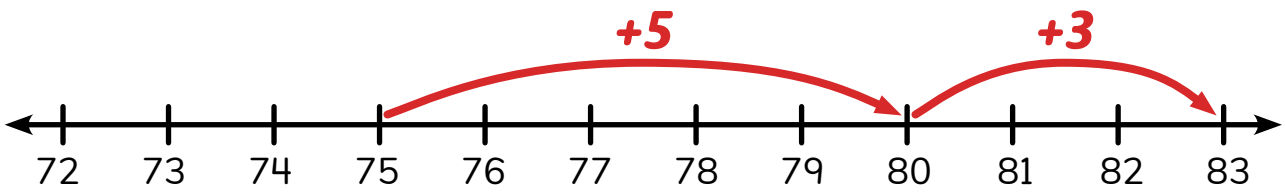
37 + 6 + 1

37 + 3 + 4

4. Solve the equation using the number line.

8 + 75 = **83**

Draw at least 2 jumps!



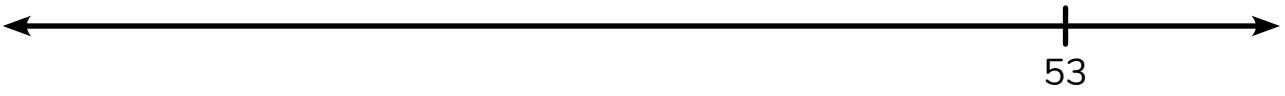
Name: _____ Date: _____

Composing 10 to Add Two-Digit Numbers

1. Vivi is using yarn for a bracelet. If she has 53 inches of yarn and cuts off 20 inches to use for the bracelet, how much yarn is left? Use the number line to model and solve the problem.

33 inches of yarn are left.

Student models will vary.



2. Is this equation true or false? Explain your thinking.

$30 + 7 = 20 + 17$

True **False**

Did you explain your thinking?

True.

Possible equation:

Both are equal to 37.

3. Use the number line to model and solve. $57 + 24 =$ ***81***

Student models will vary.

4. Vivi has 56 clay beads and 30 glass beads for her necklace making project. How many total beads does Vivi have for her project? Use the number line to model and solve the problem.

86 beads

Student models will vary.

Name: _____ Date: _____

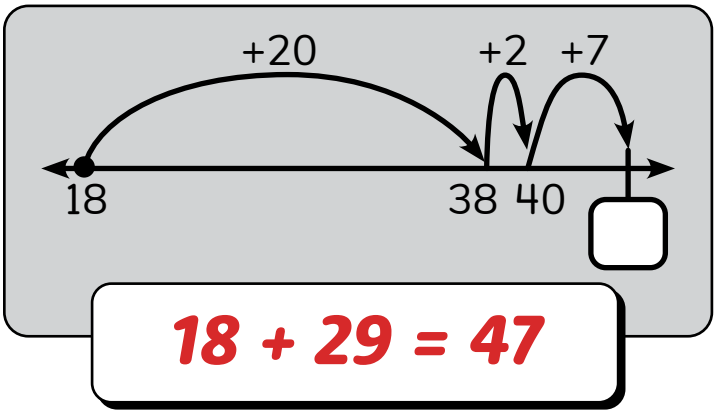
Composing 10 to Solve Addition Word Problems

1. Arman has 14 blue tiles for a project. His mom gives him 6 green tiles. How many tiles does Arman have? Write an equation to support your answer.

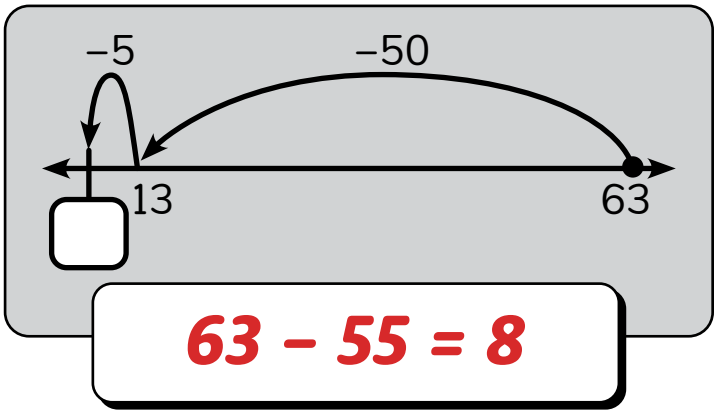
20 tiles **14 + 6 = 20**

2. Use >, <, or =. 64 **<** 82

3. Write an equation to match each model. ***Possible answers:***



18 + 29 = 47



63 − 55 = 8

4. Isaiah printed programs for the school play. He printed 45 programs on green paper and 47 programs on blue paper. How many total programs did Isaiah print? Write an equation with a ☐ for the unknown. Model and solve.

92 programs **45 + 47 = 92**

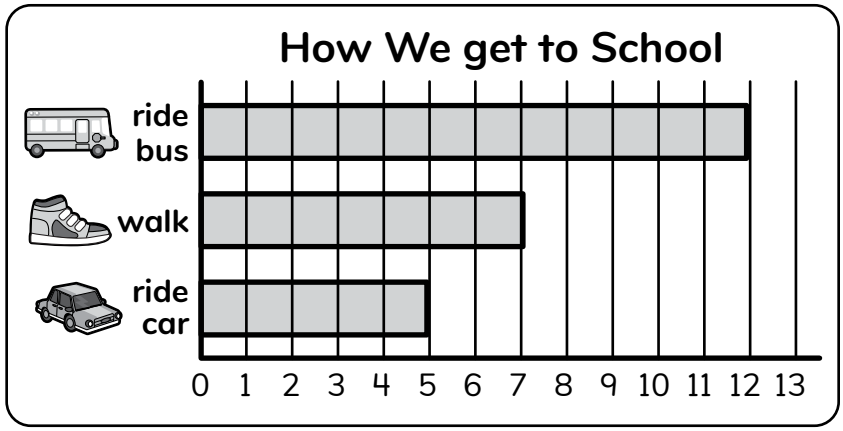
Student models will vary.

Name: _____ Date: _____

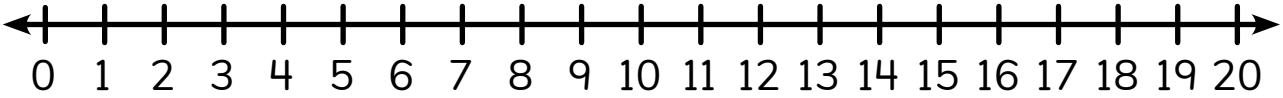
Decomposing 10 to Subtract Two-Digit Numbers

1. How many more students take the bus to school than walk? Show your work on the number line.

5 more students take the bus.

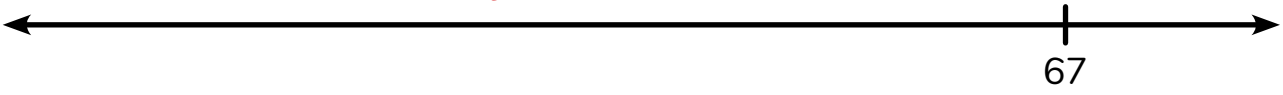


Student models will vary.



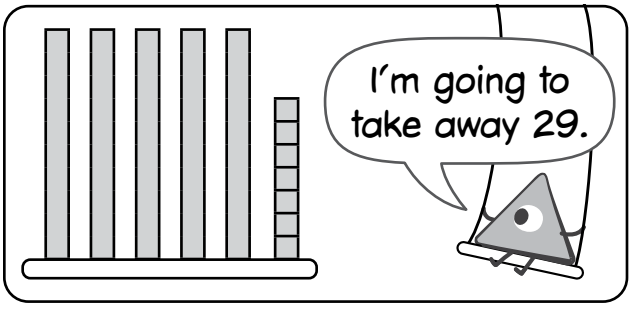
2. Aarifa swam 67 meters in the pool. Arman swam 40 meters. How much farther did Aarifa swim than Arman? Use the number line to model and solve the problem. ***27 meters***

Student models will vary.



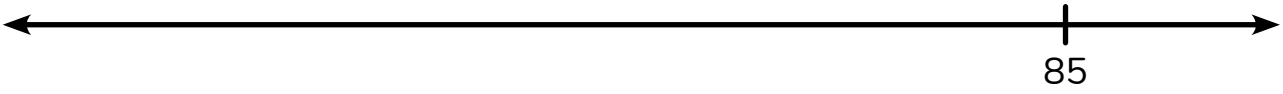
3. Write an equation to match the problem. Use the model to solve the problem.

56 − **29** = **27**



4. Isaiah had a box of 85 shells. He used 30 shells to decorate the stage background. How many shells does Isaiah have now? Use the number line to model and solve the problem. ***55 shells***

Student models will vary.



Name: _____ Date: _____

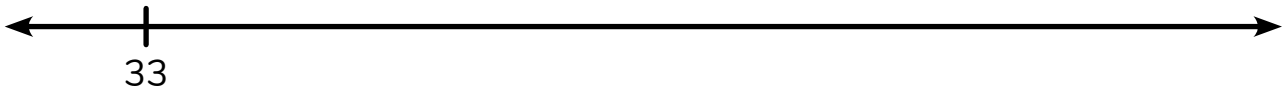
Decomposing 10 to Solve Subtraction Word Problems

1. $8 + 4 =$ **12**

2. Vivi made 33 necklaces and 20 bracelets.
How many pieces of jewelry did Vivi make?
Use the number line to model and solve the problem.

53 pieces of jewelry

Student models will vary.



3. There were 53 tickets to sell. Isaiah sold 24 tickets.
How many tickets does Isaiah have left to sell?
Use the number line to model the problem.

29 tickets

Student models will vary.

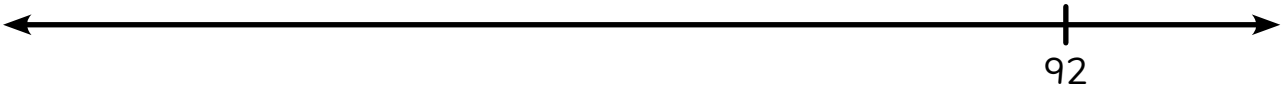
Write an equation to support your answer.

53 **−** **24** = **29**

4. Isaiah had 92 feathers. He used 50 feathers for the costumes in the play. How many feathers does Isaiah have now?
Use the number line to model and solve the problem.

42 feathers

Student models will vary.



Name: _____ Date: _____


Isaiah

Using Open Number Lines to Model and Solve Subtraction Problems

1. Create a base ten blocks drawing to solve the equation.

$78 - 35 =$ **43**

Possible drawing:

2. Isaiah has some props for the play. 17 of the props are puppets and 15 of the props are masks. Which equation could be used to find the total number of props?

$17 - 15 = \square$ $17 - \square = 15$ $17 + 15 = \square$

3. 

There were ***87 people*** watching the play. ***39 people*** were family members of the students in the play. How many of the people were not related to the students in the play?

Write an equation to match the problem. Use a ☐ for the unknown.

87 **−** **39** = **48**

Use the number line to model and solve the problem.

48 people *Student models will vary.*

4. Isaiah and the rest of the cast helped to clean up the chairs after the play. 96 chairs were put out for the play. 40 chairs have been put away so far. How many chairs are left to be cleaned up? Use the number line to model and solve the problem.

56 chairs *Student models will vary.*

96

Topic 4

Exploring Addition and Subtraction Within 100

Recommended ST Math Objectives:

Addition and Subtraction Situations within 100

Two-Digit Addition and Subtraction

One Hundred as a Unit

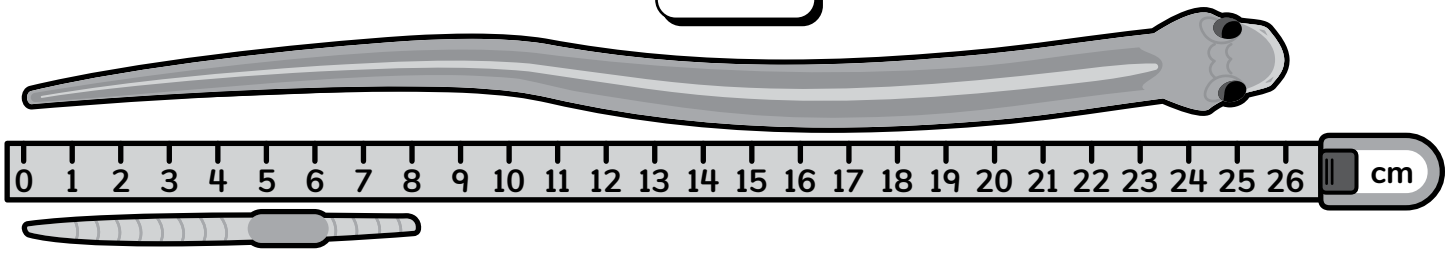
Name: _____ Date: _____

Using Decomposition Strategies to Add Four Addends

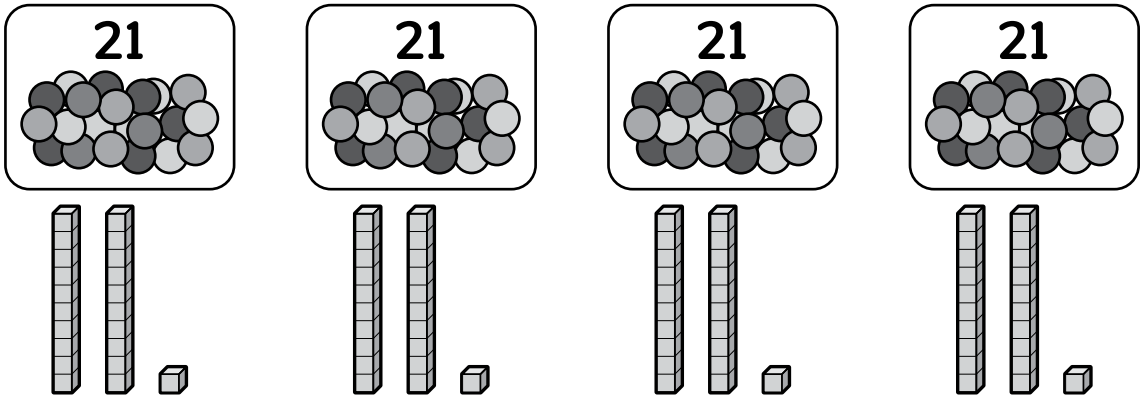
1. Circle the best estimate for the height of your teacher.

5 inches **5 feet**

2. The garter snake is about **18** cm longer than the earthworm.



3. There are **84** circles.



4. Vivi has used 36 beads when making bracelets for the craft show. She used 45 beads when making necklaces for the craft show. How many beads did Vivi use in all? Write an equation with a ☐ for the unknown. Model and solve.

36 + 45 = 81

Student models will vary.

Name: _____ Date: _____


Aarifa

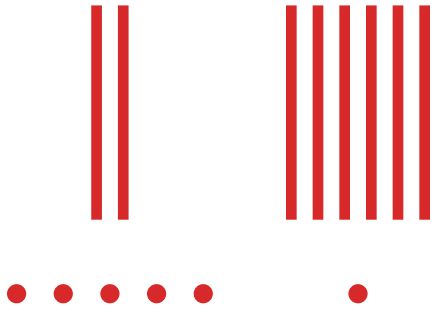
Using Grouping Strategies to Add Four Addends

1. $8 + 6 =$ **14**

2. Create a base ten blocks drawing to solve the equation.

$25 + 61 =$ **86**

Possible drawing:



80

6

3. Model with base ten blocks drawings to find the sum.

37 + **22** + **13** + **16** = **88**

Student models will vary.

4. Aarifa used a 27 screws and 18 bolts to make her newest robot. How many pieces of hardware did Aarifa use in all? Write an equation with a ☐ for the unknown. Model and solve.

27 + 18 = 45

Student models will vary.

Name: _____ Date: _____


Isaiah

Choosing Strategies to Flexibly Add Four Addends

1. Create a base ten blocks drawing to solve the equation.

$86 - 52 =$ **34**

Possible drawing:

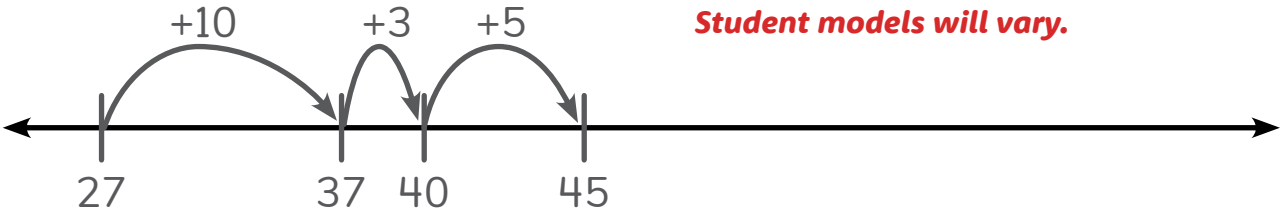
2. To find the sum of 9 + 17, you can think about 10 + 16. Do you agree that this strategy will work? Explain.

Yes

Student explanations will vary.

3. Finish the work to find the sum.

~~18~~ + 41 + 11 + ~~27~~ = **97**



Student models will vary.

4. After the play, Isaiah added up the total number of fasteners used to make the costumes. 39 buttons and 12 zippers were used for the costumes. What is the total number of fasteners used for the costumes? Write an equation with a ☐ for the unknown. Model and solve.

39 + 12 = **51**

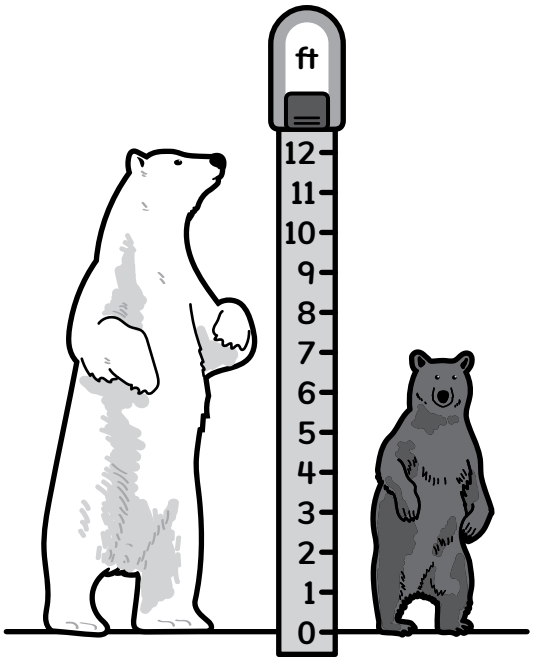
Student models will vary.

Name: _____ Date: _____

Using Strip Diagrams to Solve Addition and Subtraction Word Problems: Result Unknown

1. $13 = 4 + \boxed{9}$

2. The polar bear is about $\boxed{5}$ feet taller than the brown bear.



3. Fill in the equation and solve.

78	
43	35

I had 78 stickers in my collection. I gave 35 of them to my friend. How many stickers do I have now?

$\boxed{78} - \boxed{35} = \boxed{43}$

4. Vivi had 31 scratch and sniff stickers in her collection. She gave the 14 stickers that smelled like strawberries to a friend. How many scratch and sniff stickers does Vivi have in her collection now? Write an equation with a ☐ for the unknown. Model and solve.

$31 - 14 = \boxed{17}$

Student models will vary.

Name: _____ Date: _____

Modeling and Solving Part–Part–Total Word Problems: Part Unknown

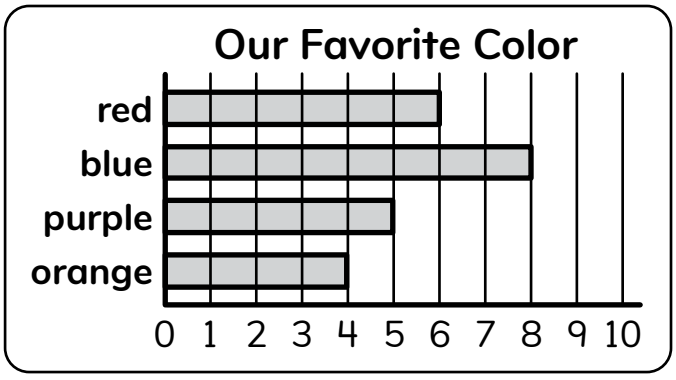
1. Isaiah is making costumes for his next play. He buys 14 yards of green fabric and 20 yards of blue fabric. How many more yards of blue fabric did he buy?

20 – 14 = 6

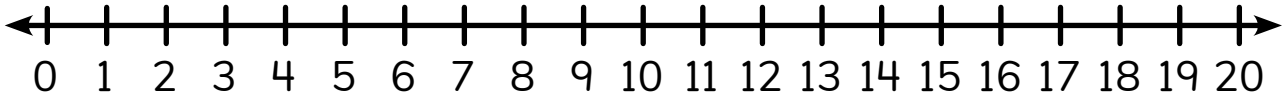
Isaiah bought 6 more yards of blue fabric.

2. How many fewer students chose orange than blue as their favorite color? Show your work on the number line.

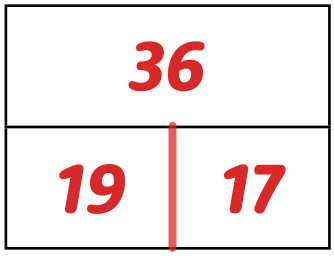
4 fewer students



Student models will vary.

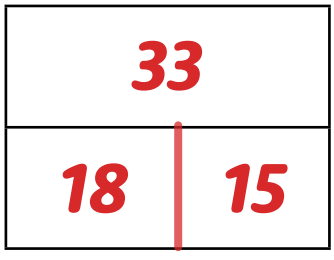


3. Complete the strip diagraml and the equation. Model and solve.



a) I have 36 shape stickers. I have 19 square stickers. The rest are star stickers. How many are star stickers?

36 **–** **19** = **17**



b) Vivi has 33 rainbow stickers in her collection. 18 are puffy stickers and the rest are sparkly stickers. How many of Vivi's rainbow stickers are sparkly?

33 **–** **18** = **15**

Name: _____ Date: _____

Modeling and Solving Take-From Subtraction Word Problems: Change Unknown

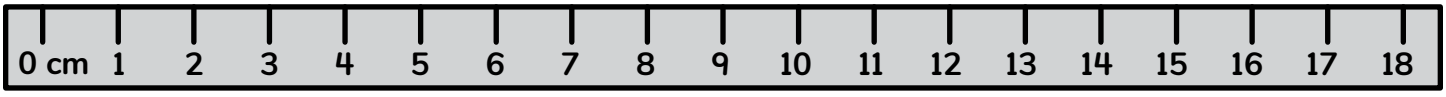
1. Model with base ten blocks drawings to find the sum.

$37 + 12 + 25 =$ **74**

Student models will vary.

2. Find the length of the paintbrush in centimeters.

about **9** cm



3. Complete the strip diagraml and the equation. Model and solve.

a) Vivi started with 82 inches of yarn. She took some yarn to finish her project. There were 38 inches of yarn left for her *halmeoni*. How many inches of yarn did Vivi use?

82	
44	38

82 − **38** = **44**

b) Vivi and her *halmeoni* decided to use lace yarn for their next knitting project. They bought 67 inches of lace yarn and used some to make a shawl for *halmeoni*. Now they have 19 inches left. How many inches of lace yarn did Vivi and her *halmeoni* use?

67	
48	19

67 − **19** = **48**

Name: _____ Date: _____

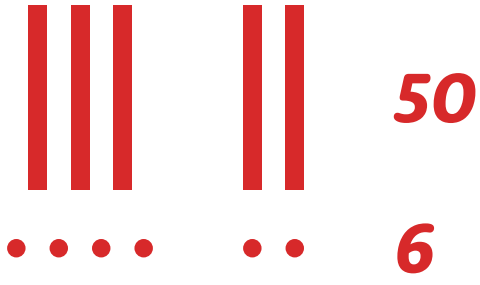
Modeling and Solving Add-To Addition Word Problems: Start Unknown

① $6 + \boxed{6} = 12$

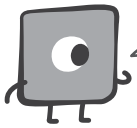
② Model with base ten block drawings to find the sum.

$34 + 22 = \boxed{56}$

Possible drawing:

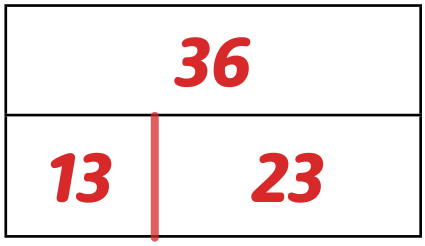


③



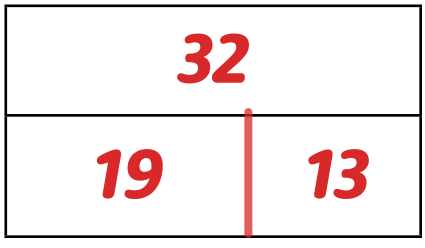
I drew a line. I added 23 inches to my line. My line is 36 inches long. How many inches long was my line at the start?

Make a strip diagram and write an equation for this problem. Use a ☐ for the unknown. Model and solve.



$23 + \boxed{13} = 36$

④ Vivi started a new scarf. Her *halmeoni* added 13 more inches to the scarf. Now the scarf is 32 inches long. How many inches long was the scarf Vivi started? Make a strip diagram and write an equation for this problem. Use a ☐ for the unknown. Model and solve.



$13 + \boxed{19} = 32$

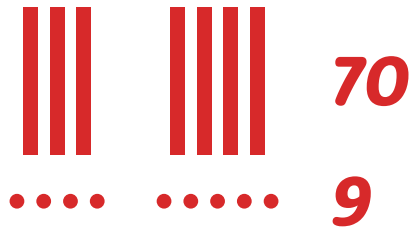
Name: _____ Date: _____

Modeling and Solving Take-From Subtraction Word Problems: Start Unknown

1. Create a base ten blocks drawing to solve the equation.

$34 + 45 =$ **79**

Possible drawing:

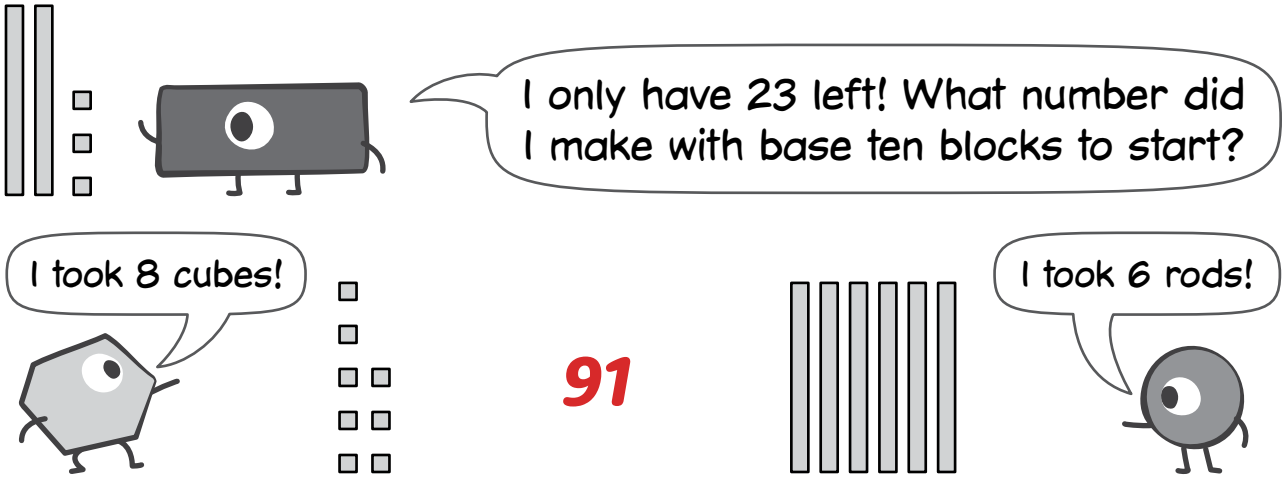


2. Model with base ten blocks drawings to find the sum.

$21 + 16 + 39 + 14 =$ **90**

Student models will vary.

3.



4. Squirrel gathered 44 acorns at the park. Chipmunk took some acorns while Squirrel went to grab a drink from the pond. Now Squirrel has 27 acorns. How many acorns did Chipmunk take? Complete the strip diagram and the equation. Model and solve.

44	
15	27

44 **–** **27** = **15**

Name: _____ Date: _____

Choosing Strategies to Solve Addition and Subtraction Word Problems

1. Create a base ten blocks drawing to solve the equation.

$62 - 35 =$ **27**

Student models will vary.

2. Skip count by 5 to fill in the missing numbers.

25, 30, **35**, **40**, **45**, 50, **55**

3. We counted 35 squirrels in the park. 14 squirrels were in the field, and the rest were in trees. How many squirrels were in trees? Model and solve with an equation.

Student models will vary.

35 – 14 = 21

21 squirrels were in trees

4. We counted 58 ants by the ant hill at the park. Some ants went inside the ant hill. Now we only see 39 ants. How many ants went inside the ant hill? Model and solve with an equation.

19 ants went inside the hill.

58 – 39 = 19

Student models will vary.

Name: _____ Date: _____

Anjali

Modeling and Solving Two-Step Addition and Subtraction Word Problems (Same Operation)

1. $3 + 8 =$ **11**

2. There were 18 fireflies in a jar. Some fireflies flew out of the jar. 14 fireflies remained in the jar. How many fireflies flew out of the jar? Model and solve with an equation.

   4 fireflies flew out of the jar.

   18 – 14 = 4 ***Student models will vary.***

3. There were 11 books in the plant bin. There are 2 books about soil and 6 books about flowers that needed to be added. How many total books will be in the plant bin? Model and complete the equation to solve.

   Student models will vary.

   11 + **2** + **6** = **19** books

4. Anjali counted 15 animal books in the book bin. She took out 4 bird books and 3 shark books. How many animal books are still in the book bin? Model and complete the equation to solve.

   Student models will vary.

   15 – **4** – **3** = **8** animal books

Name: _____ Date: _____


Anjali

Modeling and Solving Two-Step Addition and Subtraction Word Problems (Different Operations)

1. $7 + 8 =$ ***15***

2. Model and solve. $76 + 15 =$ ***91***

Student models will vary.

3. The school library return bin had 11 fiction books and 7 non-fiction books. There were 8 books that were damaged. How many books were not damaged? Model and solve.

11 + 7 = 18 books
18 – 8 = 10
10 books were not damaged.

Student models will vary.

4. Anjali counted 22 books in the sports book bin on Tuesday. On Wednesday, 3 soccer books were checked out of the bin and 4 football books were returned. How many books are in the sports book bin now? Model and solve.

22 – 3 = 19
19 + 4 = 23
23 books are in the sports book bin now.

Student models will vary.

Name: _____ Date: _____

Modeling and Solving Two-Step Addition and Subtraction Word Problems: Change Unknown


Anjali


Arman

1. Count by 10s to fill in the missing numbers.

30, **40**, **50**, **60**, 70, **80**, 90

2. Use the number line to solve. 64 − 23 = **41**

Student models will vary.

3. a) Anjali had 2 pictures on her camera. Today she took some pictures at the playground and now she has 6 pictures. How many pictures did Anjali take? Model and solve.

Student models will vary.

4 pictures

b) Then Anjali took 3 pictures at the river. How many pictures did my Anjali take today? Model and solve.

Student models will vary.

7 pictures

4. Arman baked some cookies for his class. His classmates ate 12 cookies, and now there are 33 cookies left. How many cookies did Arman bake?

Student models will vary.

45 cookies

Name: _____ Date: _____


Anjali

Modeling and Solving Two-Step Additive-Comparison Word Problems

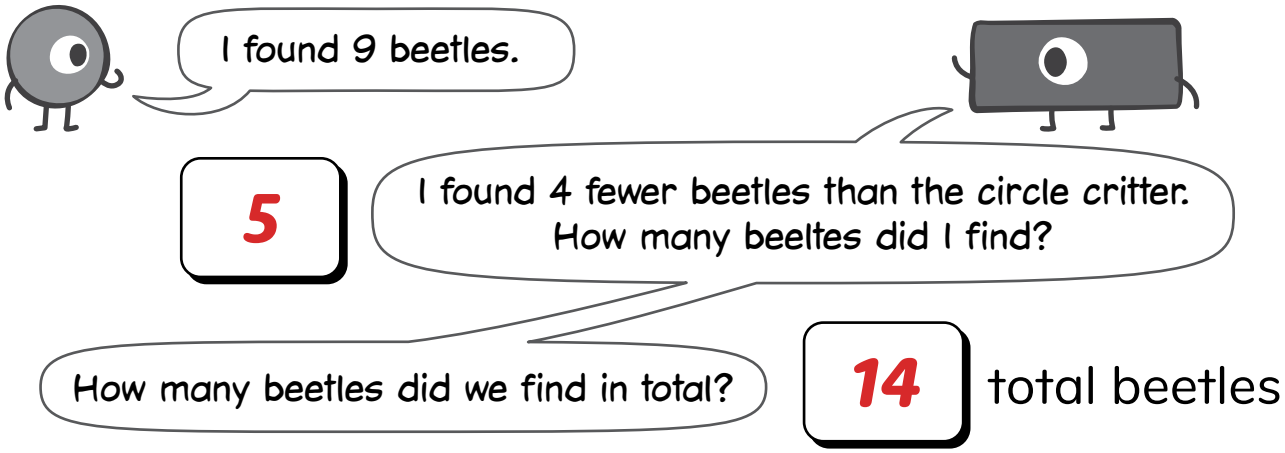
1. Model and solve. $41 - 19 =$ **22**

Student models will vary.

2. There were 72 students in the cafeteria. Some of the students went out for recess. There are now 42 students in the cafeteria. How many students went out to recess? Model and solve with an equation.

30 students went out to recess.

Student models will vary. ***72 – 42 = 30***

3. 

4. Anjali took pictures of insects she saw at the park. She took 8 pictures of butterflies. She took 3 fewer pictures of beetles. How many total pictures of insects did Anjali take? Model and solve.

Student models will vary.

13 total pictures

Topic 5

Extending Place Value Within 1,200

Recommended ST Math Objectives:

Place Value to 1,200

Place Value Bundles to 1000

Comparing Three-Digit Numbers

Name: _____ Date: _____

Anjali

Introducing Place Value

1. Model and solve.

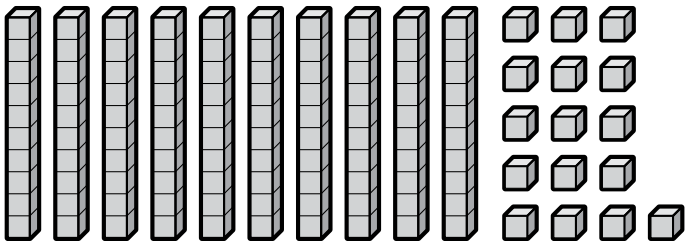
$71 - 19 =$ **57**

Student models will vary.

$41 + 26 + 13 =$ **80**

Student models will vary.

2. Write the total value of each group of base ten blocks. Are they equal or unequal? Explain your reasoning.



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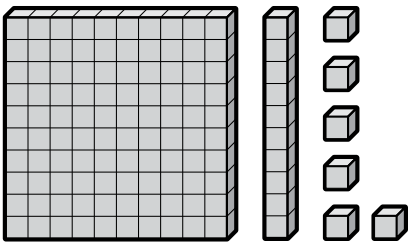

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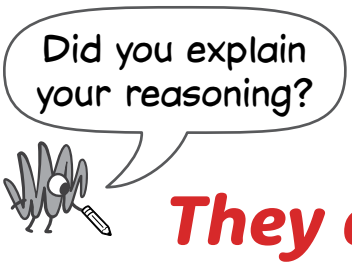


They are equal.

Possible explanation:

The numbers both have 1 hundred, 1 ten, and 6 ones.

3. A critter likes to keep their base ten blocks in a bag. If the bag has 34 ones cubes and 3 tens rods, what is the value of the base ten blocks in the critter's bag? Explain your reasoning.

64

Possible explanation:

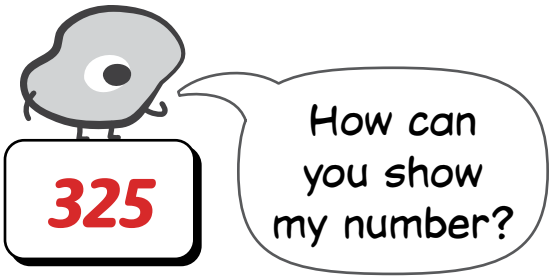
The critter has 64 base ten blocks in the bag because 34 ones is the same as 3 tens and 4 ones.

Name: Date:

Identifying and Using Place Value Patterns

① $7 + 8 =$ **15**

②



Word form

Three hundred twenty-five

Expanded form

300 + 20 + 5

Base ten block drawing

Possible drawing:

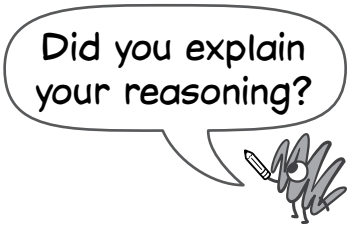
3 hundreds 2 tens 5 ones

③ A critter spilled a bowl of base ten blocks again! As they cleaned up, they found 3 hundreds flats, 9 tens rods, and 8 ones cubes. What is the value of the base ten blocks in the critter's bowl? Explain your reasoning.

398

Possible explanation:

There are 3 hundreds, 9 tens and 8 ones in the number 398.



Name: _____ Date: _____


Anjali

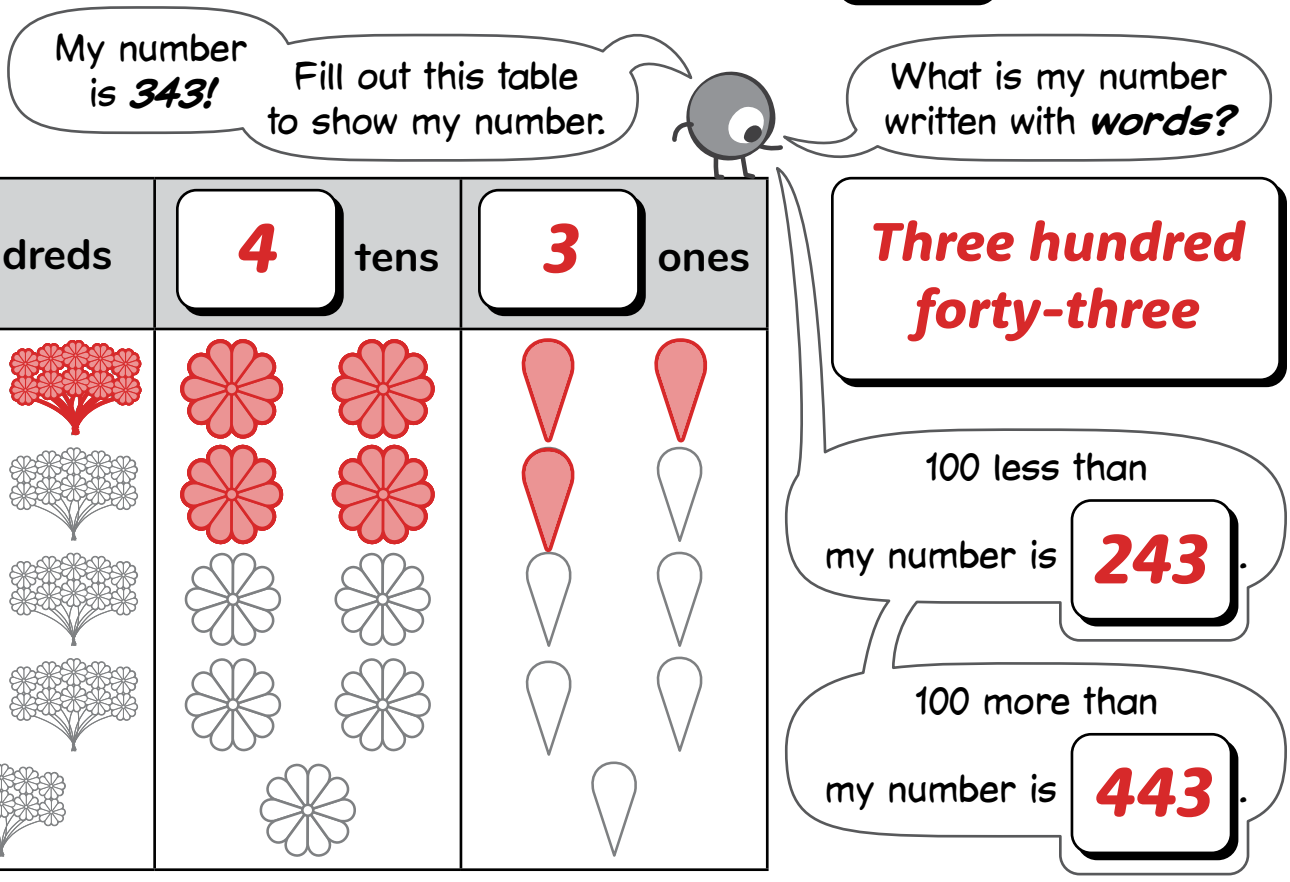
Using Place Value Reasoning to Estimate Quantities

① 10 tens = **100**

20 tens = 200

② One hundred sixty-four in standard form is written as the number **164**.

③



④ Anjali has 8 tens rods, 3 hundreds flats, and 9 ones cubes.
What is the value of Anjali's base ten blocks?
Draw a model of base ten blocks to support your answer.

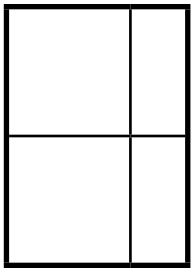
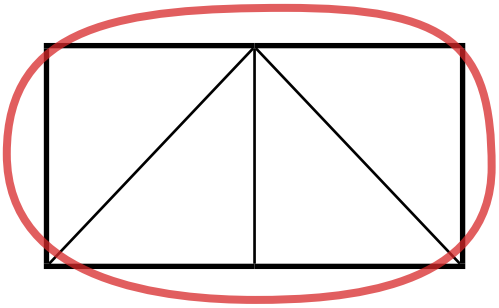
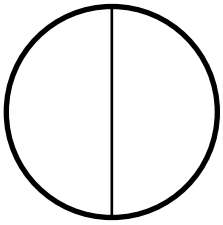
The value is 389.

Possible model:

Name: _____ Date: _____

Using Place Value Patterns to Count By 1s, 10s, and 100s

1. Which shape is partitioned into fourths?

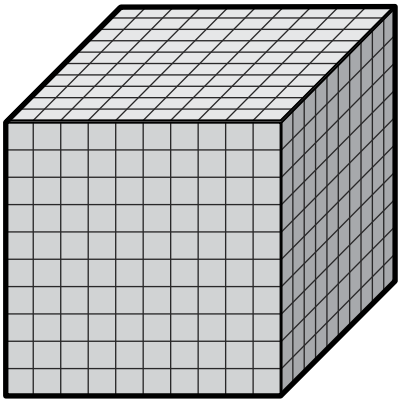




2. Which expression matches 75 - 20?

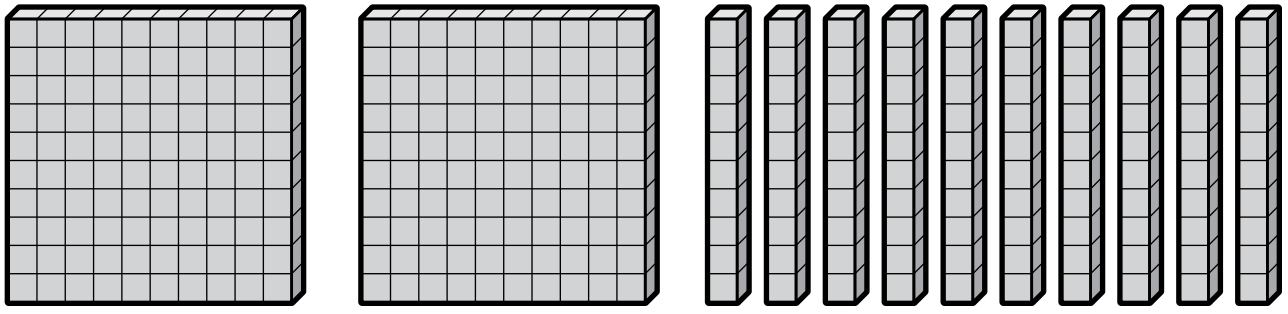
75 –2 **75 – 1 – 1** **75 – 10 – 10**

3. What number is represented by this base ten block?

1,000



4. What number is represented by the base ten blocks? **300**



Name: Date:

Representing Numbers within 1,200 in Different Forms

1. Write the number.

1,200	1,100	1,200
10 greater than 1,190	100 less than 1,200	100 greater than 1,100

2. Choose one of these numbers in standard form to show in different ways.

1,104 1,079 1,080

Possible answer:

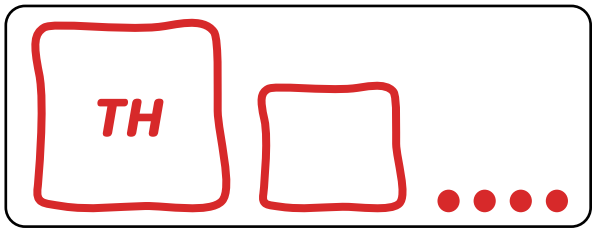
Word form: *one thousand one hundred four*

1 thousands *1* hundreds *0* tens *4* ones

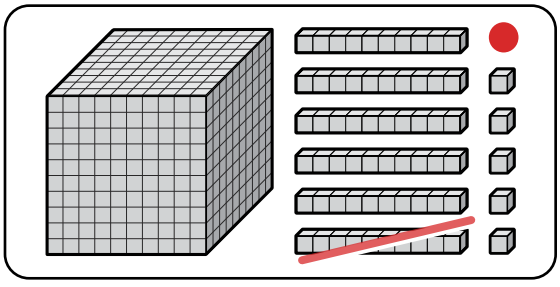
Expanded form

1,000 + 100 + 4

Draw a base-ten block model:



4. Which representations match the word form: one thousand fifty-six?



Fix any that are wrong!

1,000 + 50 + 6

1 thousands ~~1~~ 0 hundreds ~~5~~ 0 tens 6 ones

1,056

Name: _____ Date: _____

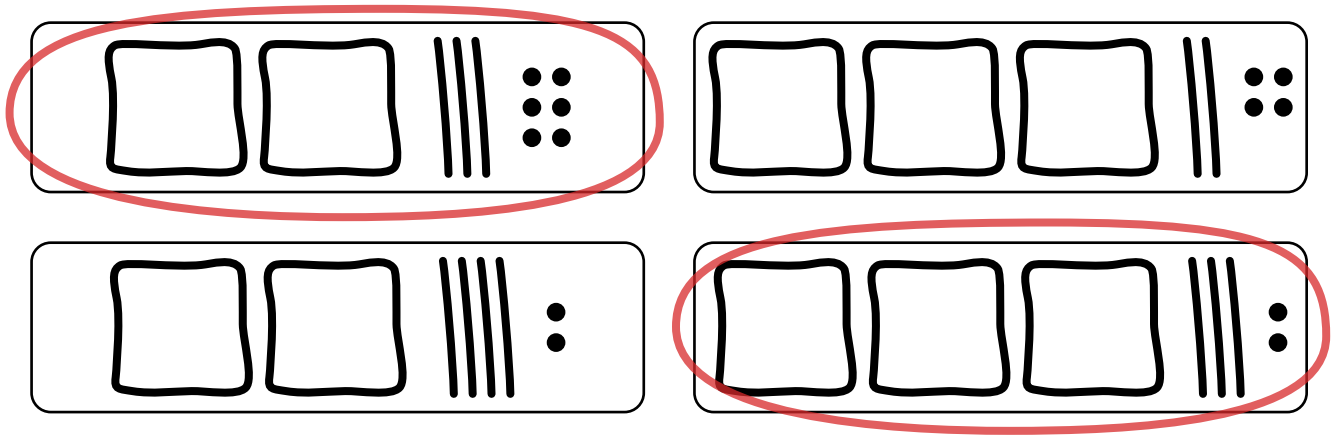
Using Models to Compose Numbers within 1,200

1. 3 hundreds = **300** 10 tens = **10** 6 ones = **6**

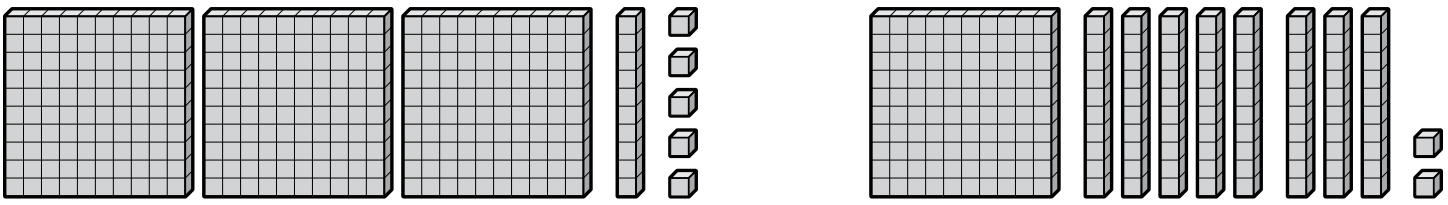
2. Solve.

   37 – 5 = **32** 54 + **9** = 63 44 = **48** – 4

3. Which two models can be combined for a sum of 568?



4. What does the sum of these blocks look like in different forms?



300 + **100** + **80** + **10** + **5** + **2**

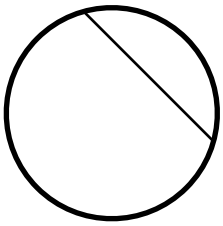
Expanded form: **400 + 90 + 7**

Standard form: **497**

Name: Date:

Using Models to Decompose Numbers within 1,200

1. Is the circle partitioned into halves, fourths, or neither? How do you know?

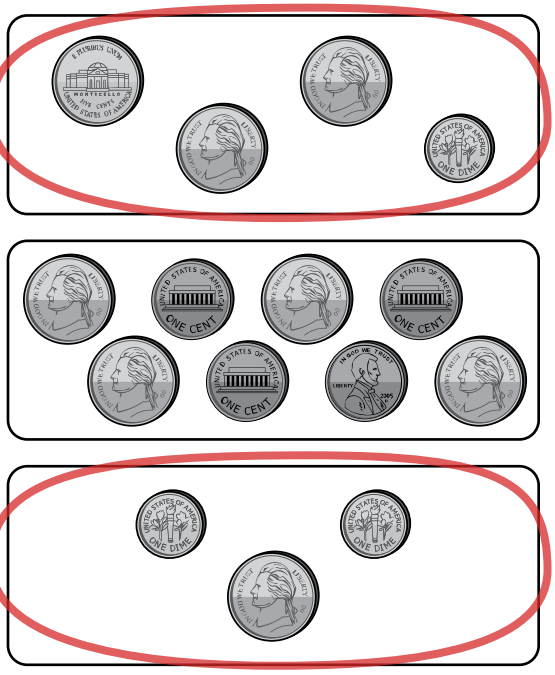


Neither

Possible explanation:

The parts are not the same size.

2. Which sets of coins have the same value as a quarter?

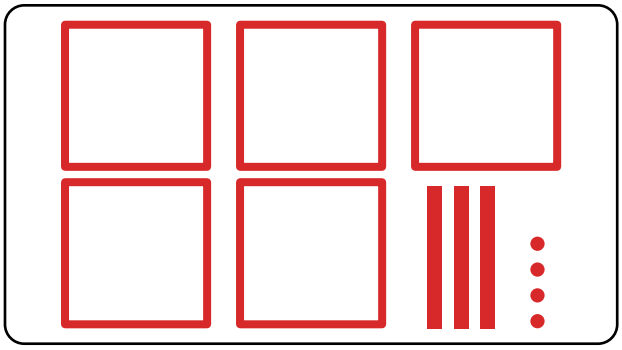


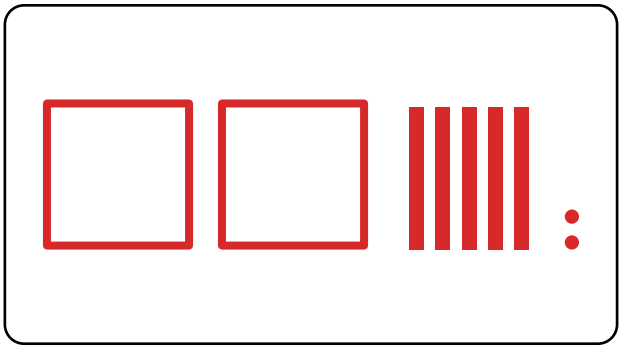
3. How could you decompose 1,198 into two parts?

1 thousands	0 thousands
1 hundreds	0 hundreds
Possible answers for tens/ones	
5 tens	4 tens
2 ones	6 ones

4. How could you decompose 786 into two parts? Draw how you know.

Possible answers:





Name: _____ Date: _____

Representing Three-Digit Numbers with Non-Standard Place Value Groupings

1. Three hundred eight is written in standard form as **308**.

2. I had 87 cents in my pocket. During lunch, I spent 40 cents on a yogurt cup. How many cents are still in my pocket? Draw a model and write an equation to solve.

Student models will vary.

47 cents **87 – 40 = 47**

3. Write the number in standard form and expanded form. Draw a base ten block model to support your answer.

2 hundreds 4 tens 19 ones

Standard form

259

Expanded form

200 + 50 + 9

Possible model:

4. Aarifa and Anjali each have a collection of base ten blocks with a value of 143. Aarifa has the most base ten blocks possible. Anjali has the fewest base ten blocks possible. What base ten blocks do Aarifa and Anjali each have? Explain.

Aarifa has 143 one units.

Anjali has 1 hundred flat, 4 tens rods, and 3 ones cubes. Student explanations will vary.

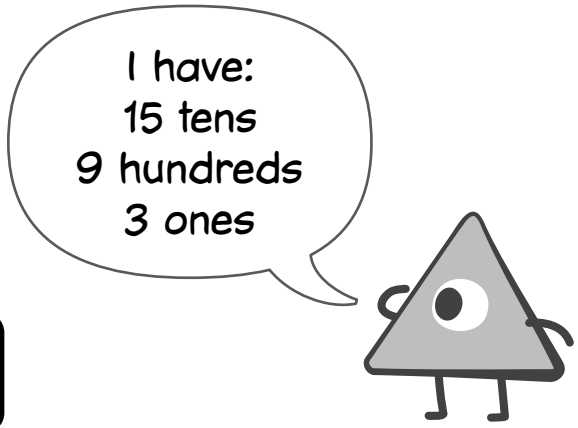
Name: _____ Date: _____

Comparing Different Forms of Numbers within 1,200

① $14 + 37 + 29 =$ **80**

② $18 - 9 =$ **9**

③ Use the critter's clue to write the number in standard form, expanded form, and word form.



Standard form

1,053

Expanded form

1,000 + 50 + 3

Word form

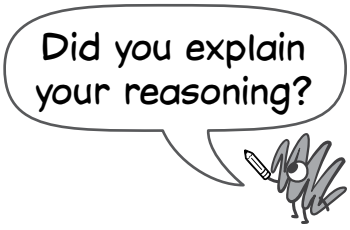
one thousand fifty-three

④ Vivi unpacked new beads she got from the craft store. She unpacked a package of 200 wooden beads, a package of 15 glass beads, and a package of 50 metal beads. How many total beads did Vivi unpack? Explain your reasoning.

Vivi unpacked 265 beads

Possible explanation:

200 + 50 + 15 = 265



Name: _____ Date: _____


Miles

Using Place Value Reasoning to Represent Numbers within 1,200 in Different Ways

1. 1,000 + 100 + 10 + 5 is written in standard form as **1,115**.

2. Some types of ants can jump 8 cm in the air. A jumping spider can jump 17 cm in the air. Compared to the ant, how much higher can the spider jump? Write an equation to solve.

   A spider can jump 9 cm higher.

   Possible equation: **17 – 8 = 9**

3. Show 1,146 with base ten block drawings in 2 different ways.

   Possible answers:

   1 thousands + **1** hundreds + **4** tens + **6** ones

   TH

   1 thousands + **0** hundreds + **14** tens + **6** ones

   TH

4. In his base ten blocks collection, Miles has 3 hundreds flats, 14 tens rods, and 14 ones cubes. He says the value of his base ten block collection is 444. Do you agree or disagree? Explain your reasoning.

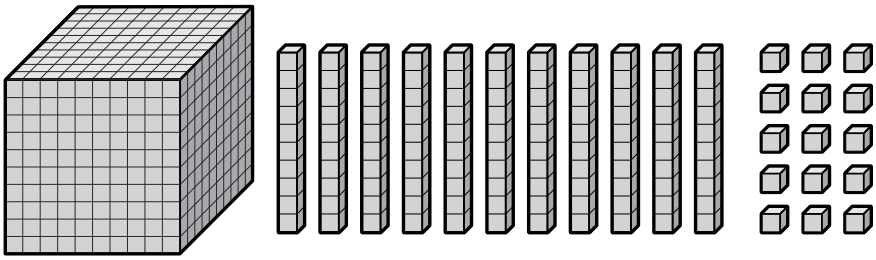
   Disagree

   Possible explanation: **The total is 454.**

Name: _____ Date: _____

Using Place Value Reasoning to Compare Numbers within 1,200

1. Write the number that is represented by the blocks.



1,125

2. $7 + 6 =$ **13**

3. Use >, <, or = to make the statement true.

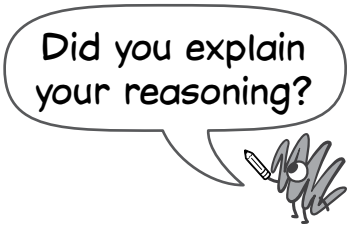
$1{,}000 + 300 + 50 + 8$ **=** $1{,}000 + 300 + 40 + 18$

4. Aarifa and Miles are comparing their base ten block collections. Aarifa has 2 hundreds flats, 15 tens rods, and 12 ones cubes. Miles has 2 hundreds, 14 tens, and 10 ones. Whose base ten block collection has a greater value? Explain your reasoning.

Aarifa's collection has a greater value.

Possible explanation:

Aarifa has 362 and Miles has 350.



Name: _____ Date: _____


Miles

Generating and Comparing Numbers within 1,200

1. Skip count by 10s to fill in the missing numbers.

220, 230, **240**, **250**, **260**, **270**, **280**, 290, **300**

2. Use >, <, or = to make the statement true.

583 **>** 385 1,020 **<** 1,200

3. Complete the comparison statement. ***Student answers will vary.***

1,145 > ____ 1,000 > ____

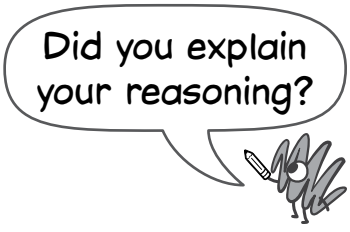
____ < 1,200 ____ < 855

4. In his base ten blocks collection, Miles has 3 hundreds flats, 14 tens rods, and 14 ones cubes. He says the value of his base ten block collection is 444. Do you agree or disagree? Explain your reasoning.

Disagree

Possible explanation:

The value of the blocks is 454.



Name: _____ Date: _____

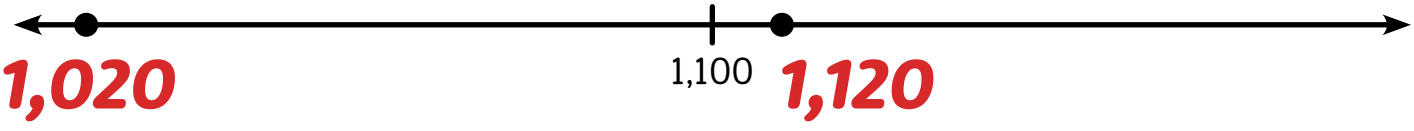

Arman

Using Place Value Reasoning to Order Numbers within 1,200 on a Number Line

1. The number 304 can be made with

Possible answer: **3** hundreds, **0** tens, and **4** ones.

2. Label the points on the number line with 1,120 and 1,020.



3. Place these points on the number line.

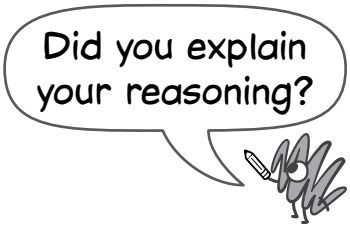
1,120 1,200 1,050

4. Arman scored 347 points in level 1 of a video game and 374 points in level 2. In which level did Arman score more points? Explain your reasoning.

Arman scored more in level 2.

Possible explanation:

374 is greater than 347.



Name: _____ Date: _____


Isaiah

Using the Number Line to Compare Numbers within 1,200

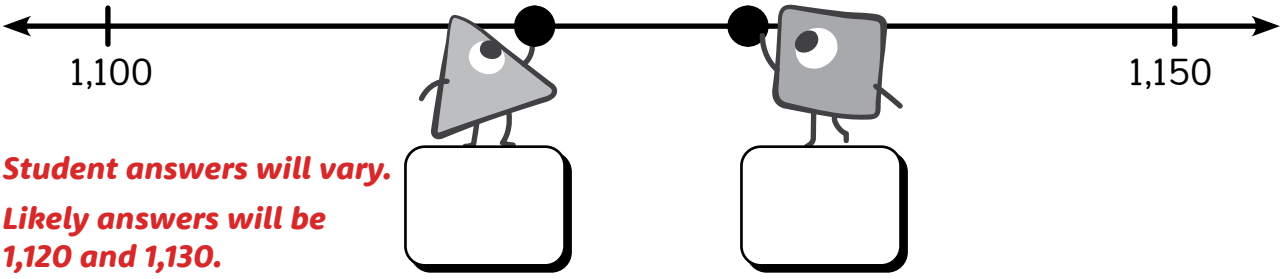
1. $4 + 6 =$ **10**

2. Use >, <, or = to make the statement true.

846 **>** 648 **>** 486

$1{,}002$ **<** $1{,}020$ **<** $1{,}200$

3. What numbers could these points represent?



Student answers will vary.

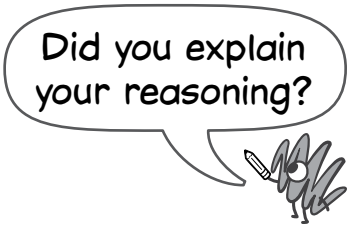
Likely answers will be 1,120 and 1,130.

4. Isaiah picked up 143 pieces of trash at the park last weekend. His sister, Lillian, picked up 134 pieces of trash. Who picked up more pieces of trash? Explain your reasoning.

Isaiah picked up more trash.

Possible explanation:

143 is greater than 134.



Topic 6

Extending Addition and Subtraction Within 1,000

Recommended ST Math Objectives:

Model Addition and Subtraction within 1000
Adding and Subtracting Tens and Hundreds
Two-Step Situations

Name: _____ Date: _____


Arman

Using Expanded Form to Add and Subtract Three-Digit Numbers

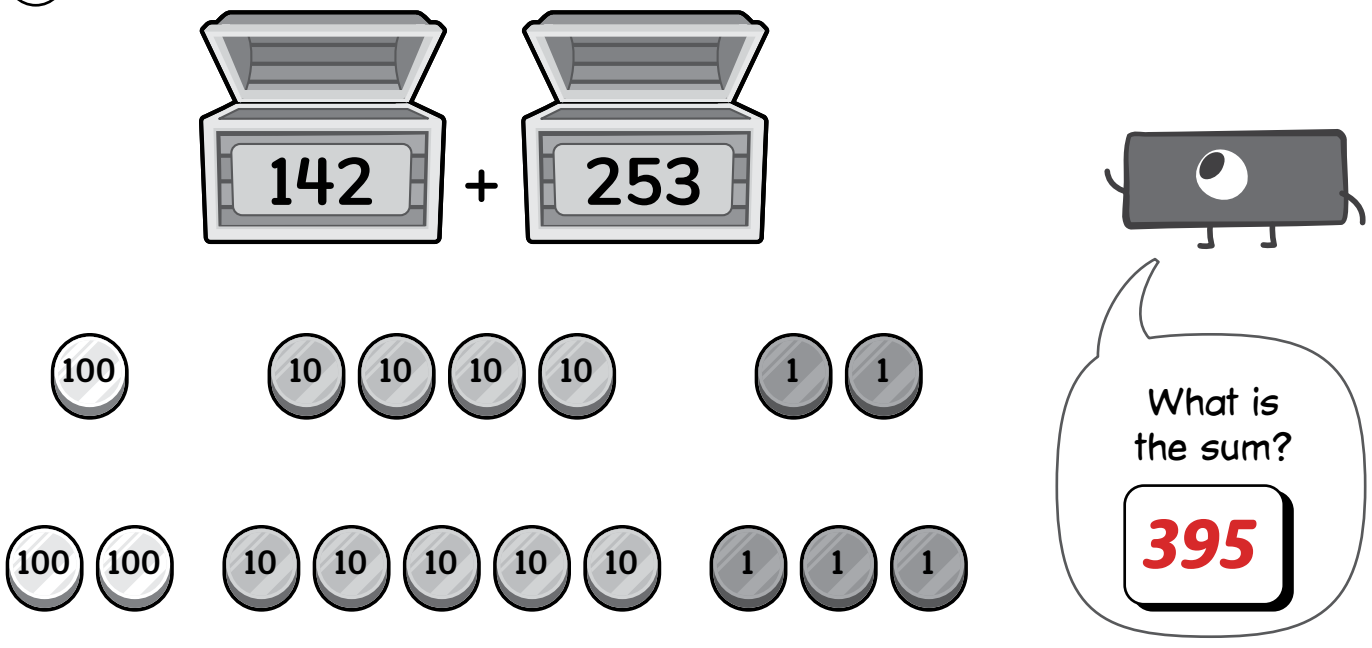
1. Compare using >, <, or =. 321 **>** 312

2. To measure the distance from our classroom to the cafeteria, would you rather use a ruler or a yardstick? Explain your reasoning.

Yardstick

Possible explanation:

A yardstick is longer and would take less time.

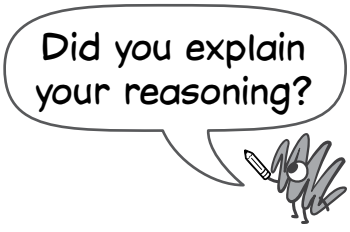
3. 

4. Arman counted 132 stars on Monday night and 123 stars on Tuesday night. On which night did Arman count more stars? Explain your reasoning.

Arman counted more stars on Monday night.

Possible explanation:

132 is greater than 123.



Name: Date:

Composing 10 to Add Two-Digit and Three-Digit Numbers

1. 1,000 + 10 + 1 can be written in standard form as **1,011**.

2. 14 − 6 = **8**

3. Model and solve on the number line. 674 − 49 = **625**

   Student models will vary.

4. Vivi's colored pencil kit has 54 regular colored pencils and 38 metallic colored pencils. How many total colored pencils does Vivi have? Model and solve with an equation.

   Vivi has 92 pencils.

   54 + 38 = 92

   Student models will vary.

Name: _____ Date: _____

Decomposing 10 to Subtract Two-Digit Numbers from Three-Digit Numbers


Arman

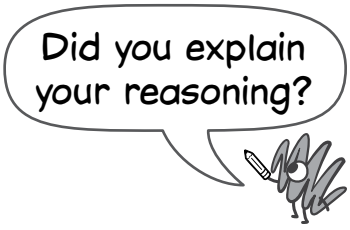
1. Write the number 1,045 in expanded form.

   1,000 + 40 + 5

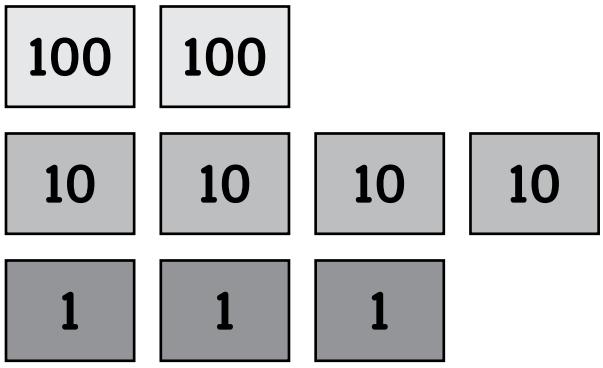
2. Is the length of your arm about 5 inches, 20 inches, or 50 inches? Explain your reasoning.

   About 20 inches.

   Student explanations will vary.



3. There are 243 books in a box. I took out 38 books. How many books are still in the box? Model and solve.

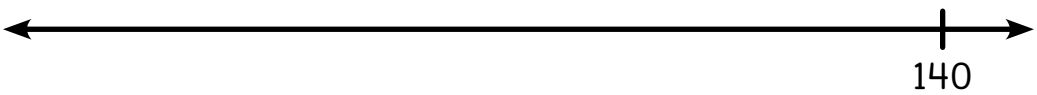


Student models will vary.

205 books

4. Arman's school collected 140 blankets. Armon took 28 of the blankets out to donate to the local community center. How many blankets are left? Model on the number line and solve.

Student models will vary.



112 blankets

Name: Date:

Composing 10 to Add Three-Digit Numbers

1. Compare using >, <, or =. 705 **>** 578

2. Use the number line to solve. 62 − 35 = **27**

Student models will vary.

3. Model and solve on the number line. Describe your strategy. 426 + 143 = **569**

Student models and explanations will vary.

4. A critter solved the problem 342 + 217 using a number line. What could the critter's work look like? Model and solve on the number line below.

559

Student models will vary.

Name: _____ Date: _____


Anjali

Decomposing 10 to Subtract Three-Digit Numbers

1. Model and solve. $48 + 27 =$ **75**

Student models will vary.

2. Anjali needs to read 70 pages to finish her book. If she reads 33 pages, how many pages will she need to read to finish the book? Draw a model and write an equation to solve.

70 – 33 = 37 pages to read to finish the book

Student models will vary.

3. a) Estimate. $482 - 269 =$ ☐ ***Student estimates will vary.***

b) Model and solve. $482 - 269 =$ **213**

Student models will vary.

4. A critter solved the problem 751 – 125 using a number line. What could the critter's work look like? Model and solve on the number line below.

626 ***Student models will vary.***

Name: _____ Date: _____


Miles

Composing 100 to Add Two-Digit Numbers

1. Model and solve. $18 + 39 + 25 + 11 =$ **93**

Student models will vary.

2. Five hundred thirty-seven is written in standard form as **537**.

3. Which two addends would make the greatest possible sum? Draw a model and complete the equation to solve.

53	76	84	62	78

84 + **78** = **162**

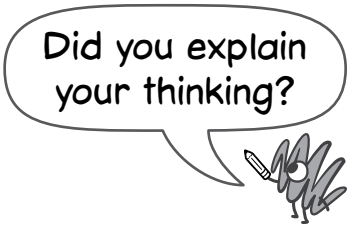
Student models will vary.

4. Miles drew the cards 65, 56, 48 and 74. He secretly picked two of the cards to make a sum. If the sum he found is 130 which two cards did Miles pick to add together? Explain your thinking.

Miles picked the cards 56 and 74.

Possible explanation:

56 + 74 = 130



Name: _____ Date: _____

Composing 100 to Add Four Addends

1. $5 + 9 =$ **14**

2. Compare using $>$, $<$, or $=$. 109 **<** 901

3. Write 2-digit numbers to make these true.

$328 +$ ☐☐ > 400

Student answers will vary.

☐☐ $+ 181 < 200$

4. Arman picked up 58 pieces of trash, Anjali picked up 64 pieces, Miles picked up 87 pieces, and Isaiah picked up 71 pieces of trash. How many total pieces of trash did the kids pick up? Model and solve.

$58 + 64 + 87 + 71 =$ **280** pieces of trash

Student models will vary.

Name: _____ Date: _____


Miles

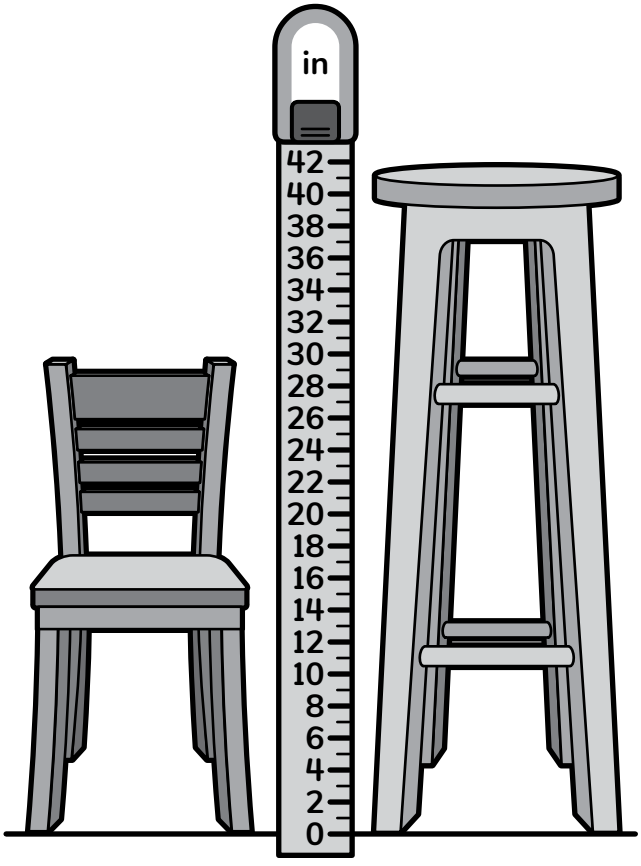
Composing 100 to Add Two-Digit and Three-Digit Numbers

1. Model and solve.

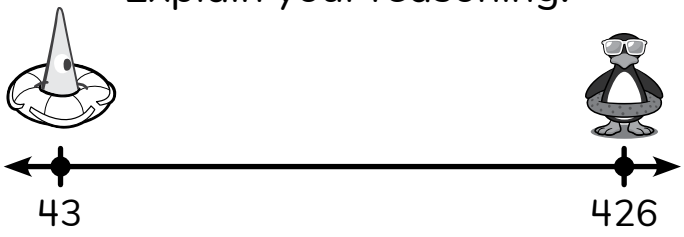
$217 + 58 =$ **275**

Student models will vary.

2. The stool is about **12** inches taller than the chair.



3. Which of these numbers will get the critter closest to JiJi? Explain your reasoning.



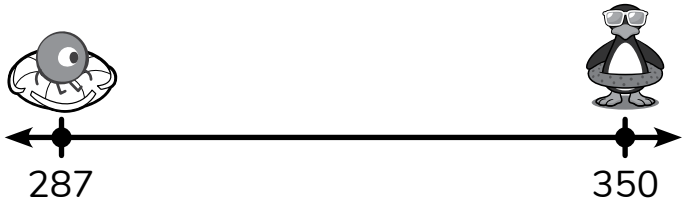
$43 +$ ☐

274 | **376** | 461 | 283

Possible explanation:

43 + 376 = 419, which is the closest to JiJi.

4. About how far is the critter from JiJi? Explain your reasoning.



20 | 40 | **60** | 80

Possible explanation:

350 – 287 = 63
so 60 is the closest.

Name: _____ Date: _____

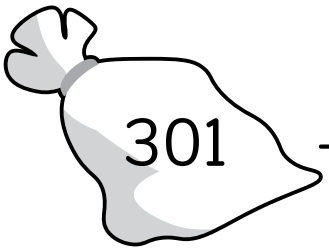
Decomposing 100 to Subtract Two-Digit Numbers from Three-Digit Numbers Isaiah

1. Compare using >, <, or =.

2 hundreds 17 tens 8 ones **<** 901

2. What is 10 more than 600? **610**

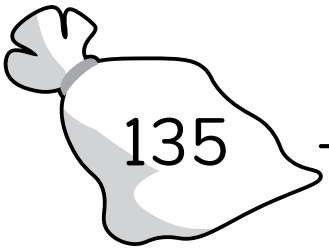
3. After picking up 301 pieces of litter from the city park, Isaiah took 76 bottles out to put in the recycle bin. How many pieces of litter are left in his bag? Model and solve.



301 – 76 = **225** pieces of litter

Student models will vary.

4. After picking up 135 pieces of litter from the neighborhood, Isaiah took 16 cans out to put in the recycle bin. How many pieces of litter are left in his bag? Model and solve.



135 – 16 = **119** pieces of litter

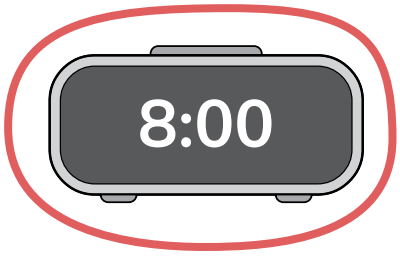
Student models will vary.

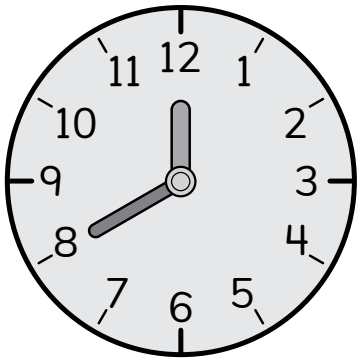
Name: _____ Date: _____

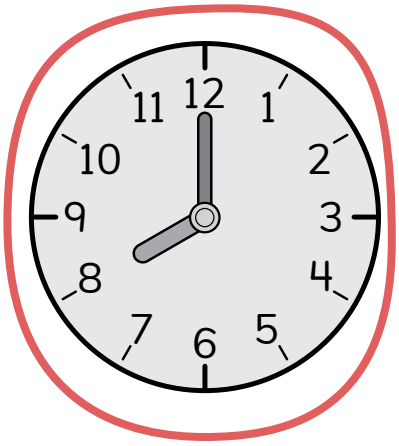

Isaiah

Solving Two-Step Addition and Subtraction Word Problems Involving Three-Digit Numbers

1. Which clock shows 8 o'clock?







2. Write a story problem to match the equation, then solve.

539 – 116 – 102 = **321**

Possible answer:

The book fair started with 539 books.
On the first day, 116 books were sold.
On the next day, 102 books were sold.
How many books were left?

Solve in this box.

Possible strategy:
539 – 116 – 102 =
500 – 100 – 100 = 300
30 – 10 = 20
9 – 6 – 2 = 1
321

3. Isaiah and friends picked up 253 pieces of litter Monday, and 146 pieces of latter on Wednesday. 187 pieces were taken out for compost and recycling. How many pieces of litter were taken to the landfill?

Write equations to match the story, then solve.

253 + 146 = **399** and **399 – 187** = **212**

250 + 140 = 390
390 + 9 = 399

Possible strategy: ***300 – 100 = 200***
90 – 80 = 10
9 – 7 = 2
212

Name: Date:

Composing 100 to Add Three-Digit Numbers

① $476 - 82 =$ **394**

② $8 + 7 =$ **15**

③ Model and solve. $672 + 315 =$ **987**

Student models will vary.

④ A recycling bin had 112 bottles. Isaiah added 91 bottles to the bin. How many bottles are in the bin? Model and solve.

Student models will vary.

$+ \ 91 =$ **203** bottles

Name: Date:

Decomposing 100 to Subtract Three-Digit Numbers

1. Compare using >, <, or =.

$$726 \;\; < \;\; 700 + 10 + 26$$

2. Three hundred sixty in standard form is written as **360**.

3. The bodega had apples. At the end of the month, how many apples does the bodega have left? Model and solve.

	
Beginning of the month	412
Sold this month	185

$412 - 185 =$ **227**  apples

Student models will vary.

4. The bodega had 280 boxes of cereal at the beginning of the month. If they sold 192 boxes of cereal during the month, how many boxes of cereal do they have left? Model and solve.

$280 - 192 =$ **88** 

boxes of cereal

Student models will vary.

Name: _____ Date: _____

Identifying Addend Pairs to Compose 100

① $12 - 6 =$ **6**

② Model and solve. $300 - 10 =$ **290**

Student models will vary.

③ Find the missing addend that completes each equation.

$72 +$ **28** $= 100$ $28 +$ **72** $= 100$

④ Vivi has 100 stickers in her sticker collection. Some are scratch and sniff stickers and the rest are puffy stickers. If 84 stickers are scratch and sniff stickers, how many are puffy stickers? Model and solve with an equation.

16 stickers are puffy stickers.

Possible equation:

100 – 84 = 16

Student models will vary.

Name: _____ Date: _____


Anjali

Composing 10 and 100 to Add Two-Digit Numbers and Three-Digit Numbers

1. Model and solve. $31 + 14 + 20 =$ **65**

Student models will vary.

2. The number 301 can be represented with

Possible answer: **3** hundreds, **0** tens, and **1** ones.

3. Anjali finished her reading log for week 4.

	School	Home	Total
Week 4	56 pages	118 pages	***174 pages***

How many pages did Anjali read in week 4?
Model and solve with an equation.

56 + 118 = 174

Student models will vary.

4. Vivi has a collection of 115 glass beads and 285 wooden beads. If she buys a package of 55 metal beads, how many beads will she have in her collection? Model and solve with an equation.

115 + 285 + 55 = 455 beads

Student models will vary.

Name: _____ Date: _____


Isaiah

Composing 10 and 100 to Add Three-Digit Numbers

1. Find the missing addend that completes the equation.

$$12 + \boxed{88} = 100$$

2. Model and solve. $200 + 100 = \boxed{300}$

Student models will vary.

3. Model and solve. $584 + 316 = \boxed{900}$

Student models will vary.

4. Isaiah said he knew the sum of 584 + 316 would have a zero in the ones place before he even starting solving the problem. Explain Isaiah's thinking.

Possible explanation:

Isaiah knew because 4 plus 6 in the ones place equal 10, which has a zero in the ones place.

Name: _____ Date: _____

Decomposing 10 and 100 to Subtract from Multiples of 100

1. Model and solve. $233 + 378 =$ **611**

Student models will vary.

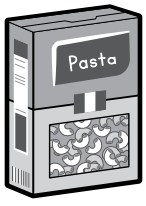
2. $14 - 7 =$ **7**

3. Model and solve. $500 - 328 =$ **172**

Student models will vary.

4. Vivi made a necklace out of dried macaroni noodles. 300 macaroni noodles were in the box. Vivi used 114 macaroni noodles. How many macaroni noodles were left in the box? Model and solve.

Student models will vary.



$300 - 114 =$ **186** macaroni noodles

Name: _____ Date: _____


Leilah

Decomposing 10 and 100 to Subtract Numbers with 0 Tens

1. Count by 10s to fill in the missing numbers.

460, 470, **480**, **490**, **500**, **510**, **520**, 530

2. Model and solve.

612 – 459 = **153**

Student models will vary.

3. Create an equation. Model and solve.

Any digits 5–9 | Any digits 1–4

5 ☐ ☐ – ☐ 1 ☐ = ***Student answers will vary.***

Student models will vary.

4. Leilah started unpacking a crate of apples into bins at her family's bodega. The crate had 95 apples when Leilah started. Now there are 47 apples left in the crate. How many apples did Leilah unpack? Model and solve with an equation.

95 – 47 = 48

Leila unpacked 48 apples.

Student models will vary.

Name: _____ Date: _____

Decomposing 10 and 100 to Subtract Two-Digit Numbers from Three-Digit Numbers

1. $17 + 16 + 23 + 14 =$ **70**

2. Vivi had 178 beads. She used 30 beads to make a necklace. Your friend says that Vivi has about 150 beads left. Do you agree? Explain.

   Yes

   Possible explanation:

   178 – 30 = 148, which is about 150.

3. Leilah's family donated 232 fruits and 113 vegetables. How many total items did they donate? Model and solve with an equation.

   232 + 113 = 345 items

   Student models will vary.

4. Leilah's family sold 167 cans of beans and 232 cans of tomatoes at the bodega. How many total cans of food did they sell? Model and solve with an equation.

   167 + 232 = 399 cans of food

   Student models will vary.

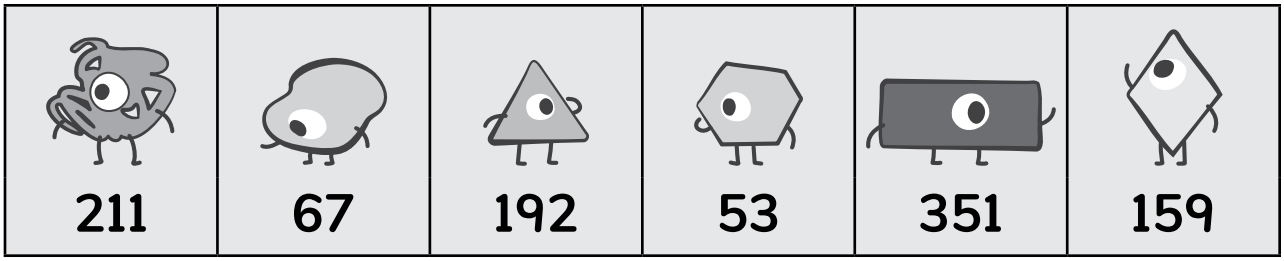
Name: _____ Date: _____

Comparing Strategies for Adding and Subtracting Three-Digit Numbers

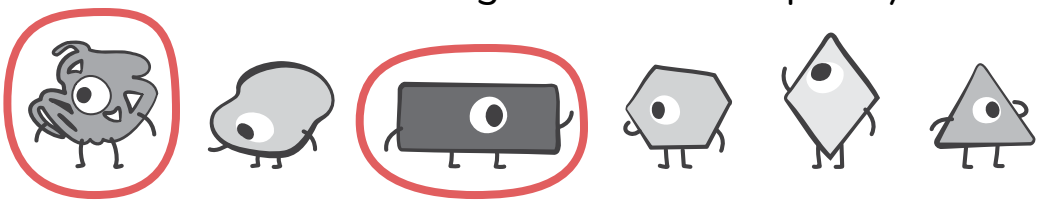
1. $6 + 6 =$ **12**

2. Compare using $>$, $<$, or $=$.

$300 + 60 + 17$ **>** 367

3. 

Which 2 critters would have the greatest sum? Explain your reasoning.



Possible explanation:

These critters have the greatest numbers, so adding them together will give the greatest sum.

4. Using the critters you chose from Problem 3, create an addition equation. Model and solve.

211 + **351** = **562**

Student models will vary.

Topic 7

Investigating Data

Recommended ST Math Objectives:

Creating Graphs
Comparing Three-Digit Numbers
Skip Counting

Name: Date:

Using Picture Graphs to Organize and Display Data

1. Model and solve. $15 + 29 + 25 =$ **69**

Student models will vary.

2. Model and solve. $368 - 127 =$ **241**

Student models will vary.

3. a) How many more tacos were sold than sandwiches?

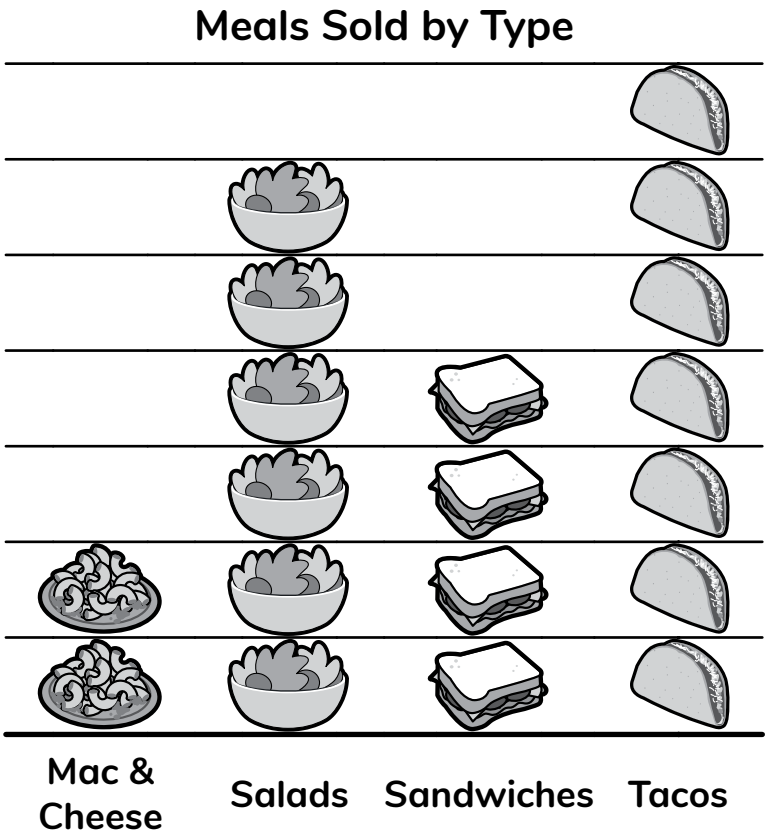
3

more tacos

b) How many fewer sandwiches were sold than salads?

2

fewer sandwiches



Name: _____ Date: _____


Isaiah

Using Segmented Bar-Type Graphs to Answer Questions

1. Model and solve.

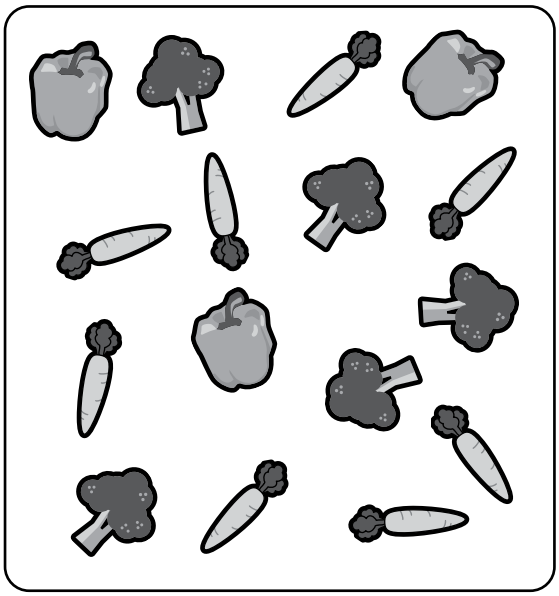
$72 + 45 =$ **117**

Student models will vary.

2. How would you write the number 327 in expanded form?

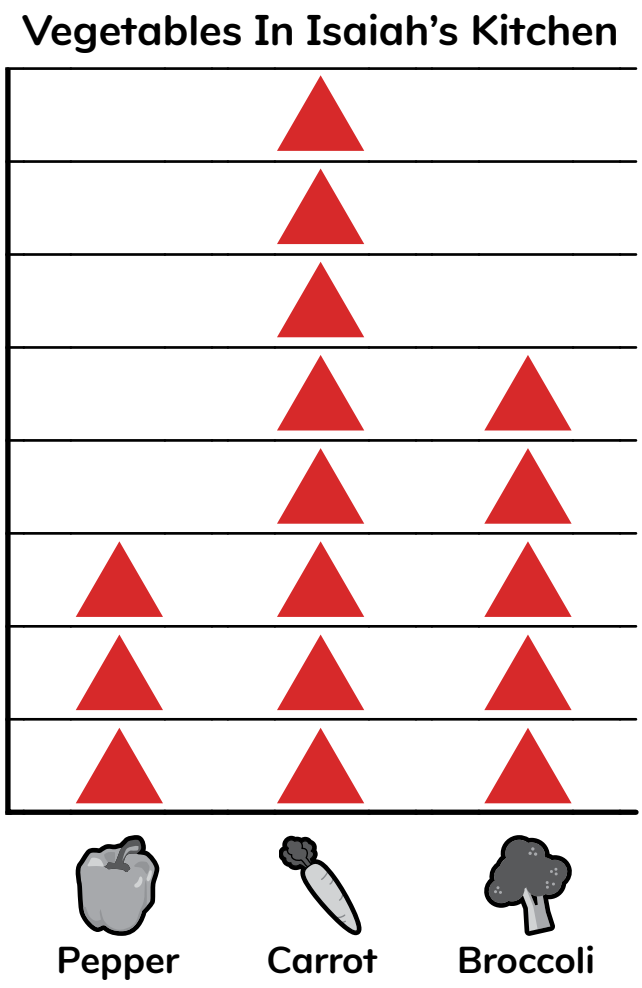
300 + 20 + 7

3. a) These are the vegetables Isaiah has in his kitchen. Create a pictograph of the data.



b) How many more carrots does Isaiah have than peppers?

5 more carrots



Name: _____ Date: _____

Using Unsegmented Bar Graphs to Answer Questions

1. Before lunch, there were some milk cartons in the cafeteria cooler. Students bought 83 cartons of milk during lunch. After lunch, there are 15 milk cartons left. How many milk cartons were in the cooler before lunch?

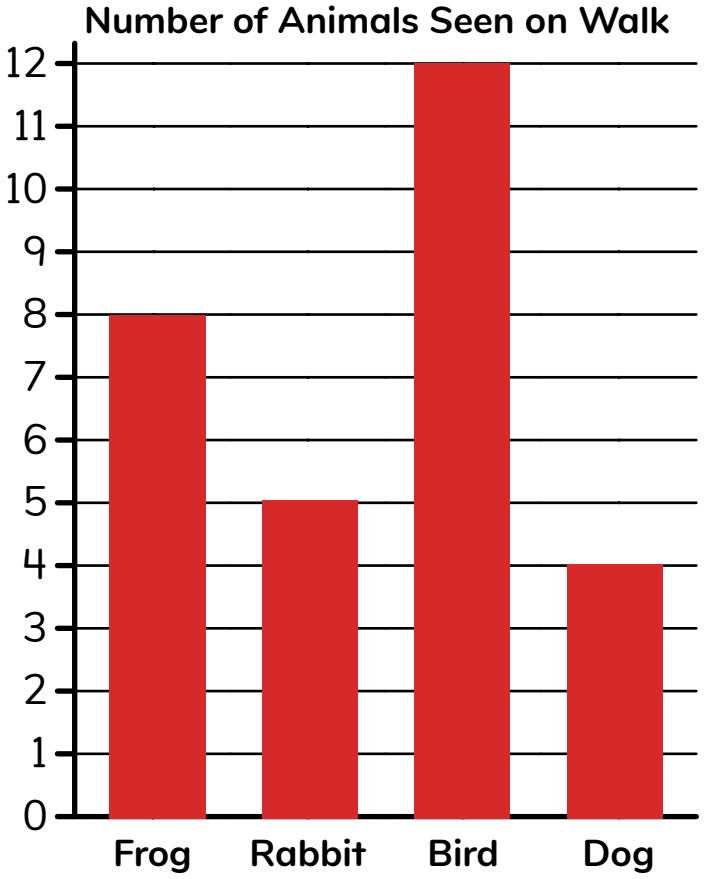
98 milk cartons

2. Model and solve. $590 - 245 =$ **345**

Student models will vary.

3. a) Build a bar graph using the data in the table.

Number of Animals Seen on Walk	
	8
	5
	12
	4



b) How many fewer rabbits were seen than birds?

7 fewer rabbits

Name: Date:

Creating and Analyzing Bar Graphs

1. $17 - 8 =$ **9**

2. How would you write the number 560 in expanded form?

   500 + 60

3. a) Use the bar graph showing the farmer's market pepper sales to complete the statement.

   The farmer's market sold **10** more R than O.

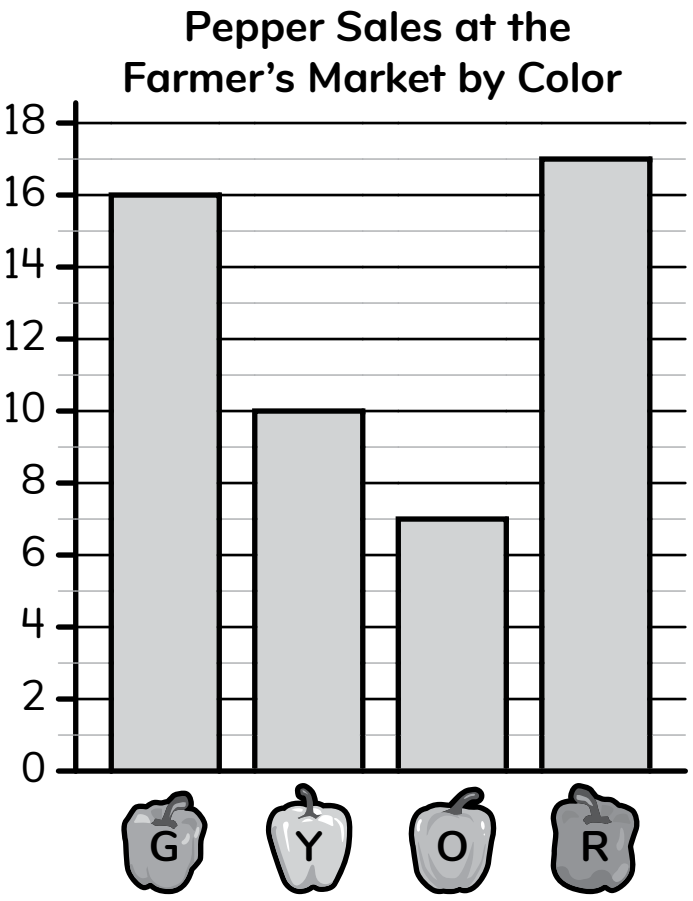
   b) How many total green (G) and red (R) bell peppers were sold? Model and solve with an equation.

   16 + 17 = 33

   Student models will vary.

   33

   green and red bell peppers



Name: _____ Date: _____

Comparing Different Ways of Sorting Data

1. Count by 5s to fill in the missing numbers.

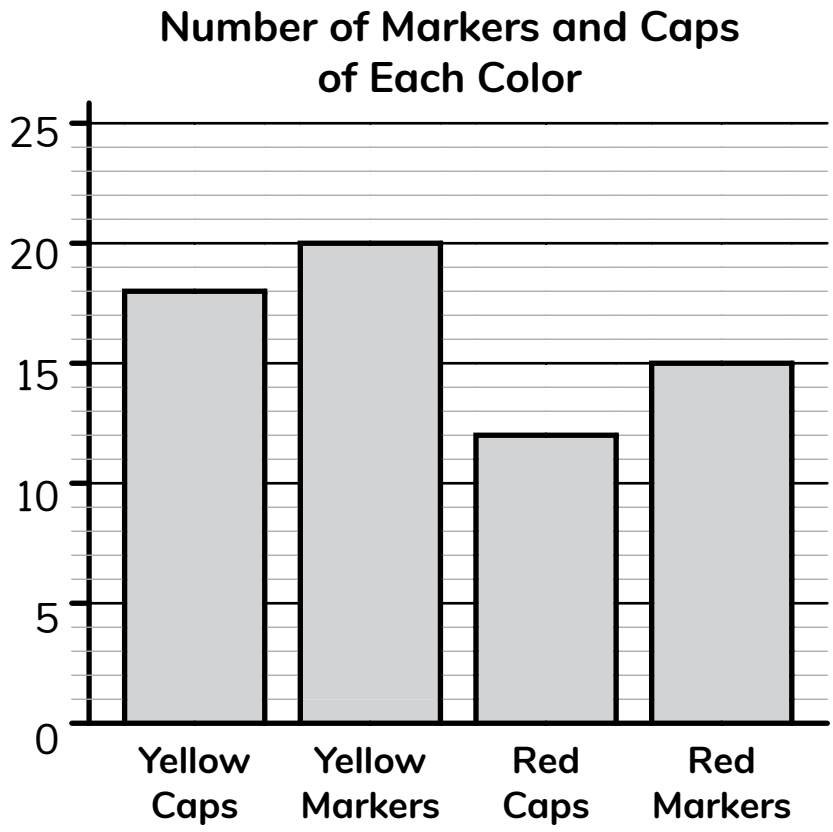
35, 40, **45**, **50**, **55**, **60**, **65**, 70

2. Six hundred forty-two in standard form is written as **642**.

3. a) How many more yellow markers are there than yellow caps?

2 more yellow markers

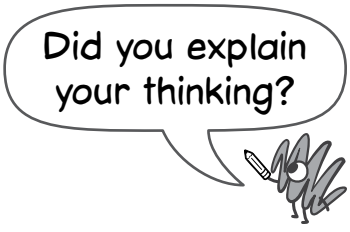
b) Are more red or yellow caps needed? Explain your thinking.



Red caps

Possible answer:

3 red markers need caps, and 2 yellow markers need caps.



Name: Date:

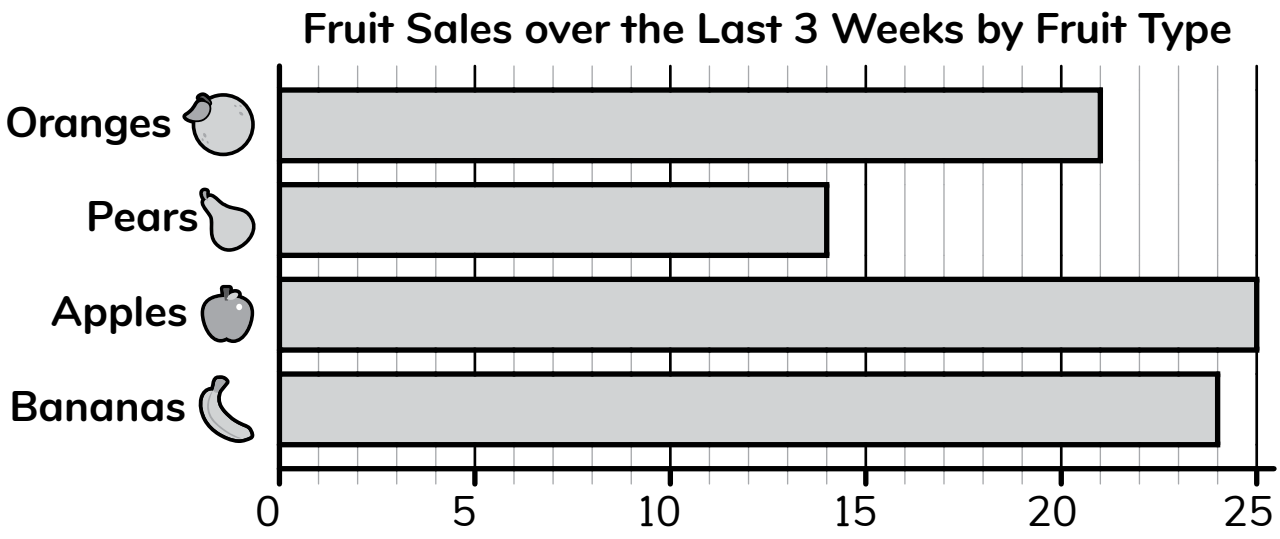
Using Bar Graphs to Make Decisions

1. Compare using >, <, or =. $100 + 40 + 27$ **<** 177

2. Model and solve. $78 + 21 =$ **99**

Student models will vary.

3.



a) How many fewer pears were sold than bananas over the last 3 weeks? **10** fewer pears

b) How many total apples and oranges were sold over the last 3 weeks? Model and solve with an equation.

25 + 21 = 46

Student models will vary.

46 apples and oranges

Name: Date:

Using Different Data Displays to Find Missing Data

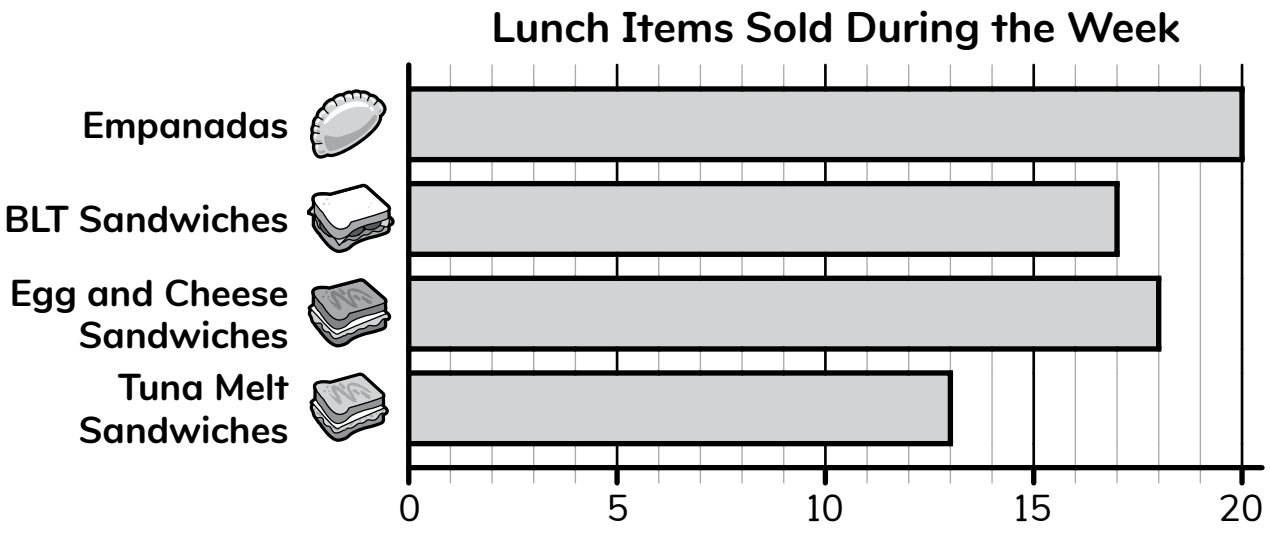
② Model and solve. $37 + 18 + 22 + 13 =$ **90**

Student models will vary.

② Model and solve. $709 - 587 =$ **122**

Student models will vary.

③



a) How many more empanadas were sold than tuna melt sandwiches? **7** more empanadas

b) How many total tuna melt sandwiches and BLT sandwiches were sold during the week? Model and solve with an equation.

13 + 17 = 30

Student models will vary.

30 tuna melt and BLT sandwiches

Name: Date:

Using a Data Investigation Process

1. What is 10 less than 200? **190**

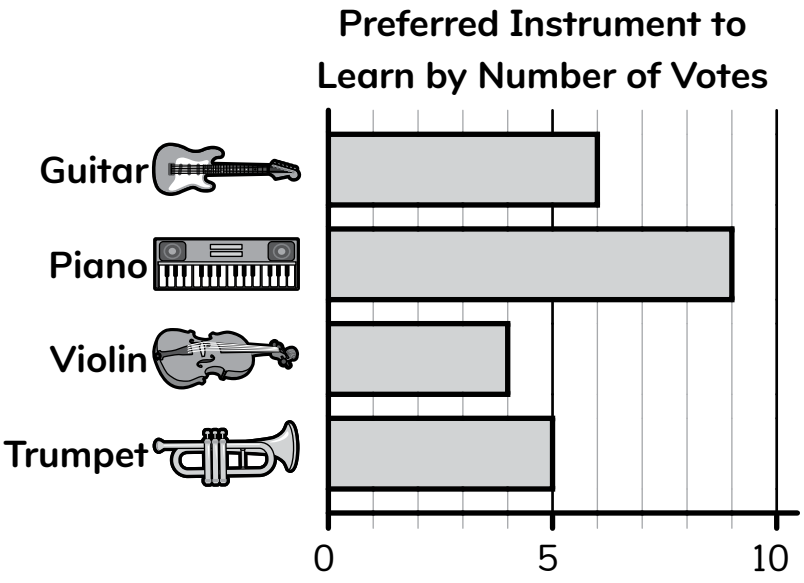
2. Model and solve. 605 − 339 = **266**

Student models will vary.

3. a) How many more students chose piano than trumpet?

4

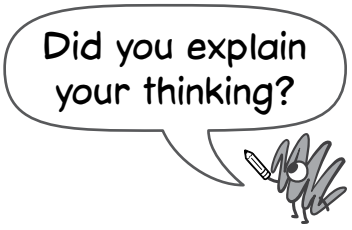
more students



b) Which two instruments do students prefer to learn the most? Explain your thinking.

Piano and guitar

Student explanations will vary.



Name: _____ Date: _____

Completing a Data Investigation to Answer a Question

1. Anjali counted 11 animal books in the book bin. She took out 3 reptile books and 5 mammal books. How many animal books are still in the book bin? Model and complete the equation to solve.

Student models will vary.

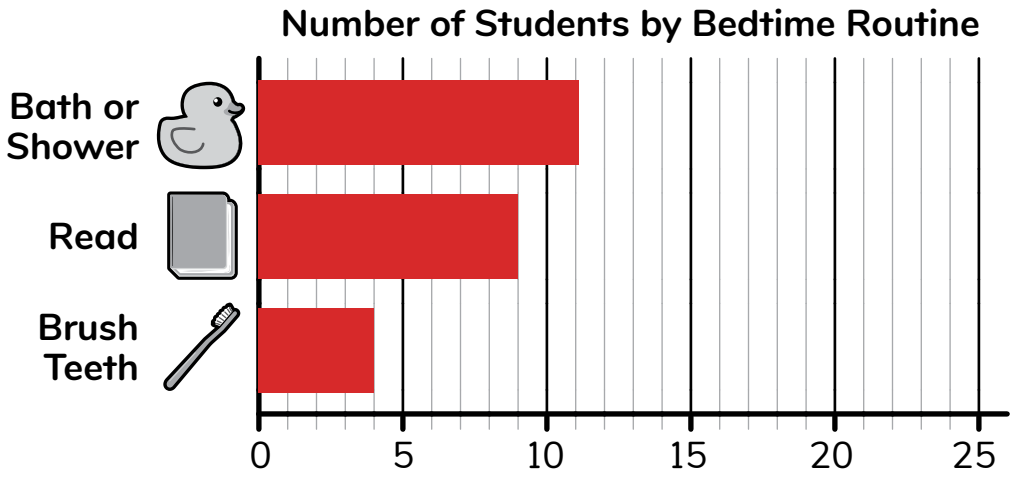
11 − **3** − **5** = **3** books

2. Count by 5s to fill in the missing numbers

55, 60, **65**, **70**, **75**, **80**, **85**, **90**, 95

3. a) Students were asked last thing they do at night before going to bed. Use the data in the table to complete the bar graph.

Last Thing Our Class Does Before Bed	
Bath or Shower	11
Read	9
Brush Teeth	4



b) How many fewer students brush their teeth than read as the last thing they do before bed?

5 fewer students

Name: Date:

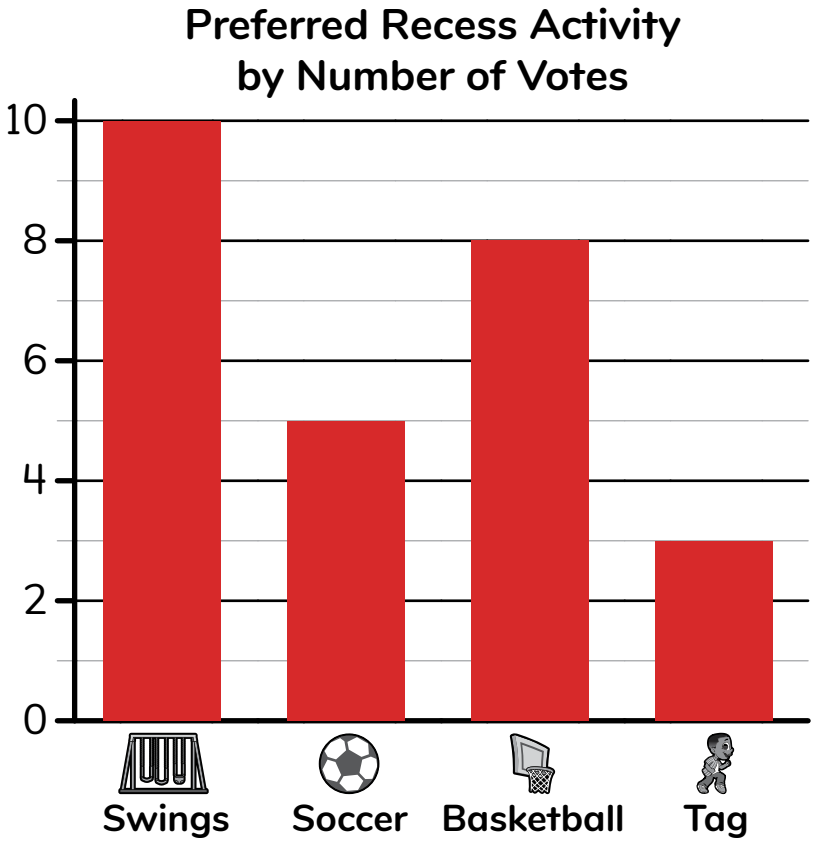
Completing a Data Investigation to Make a Decision

① $18 + 4 =$ **12**

② 208 in word form is written as **two hundred eight**.

③ Use the table to complete the bar graph.

Preferred Recess Activity	
Swings	10
Soccer	5
Basketball	8
Tag	3



How many fewer more students voted for soccer than basketball?

3 more students

Name: Date:

Planning and Conducting a Data Collection About Book Preferences

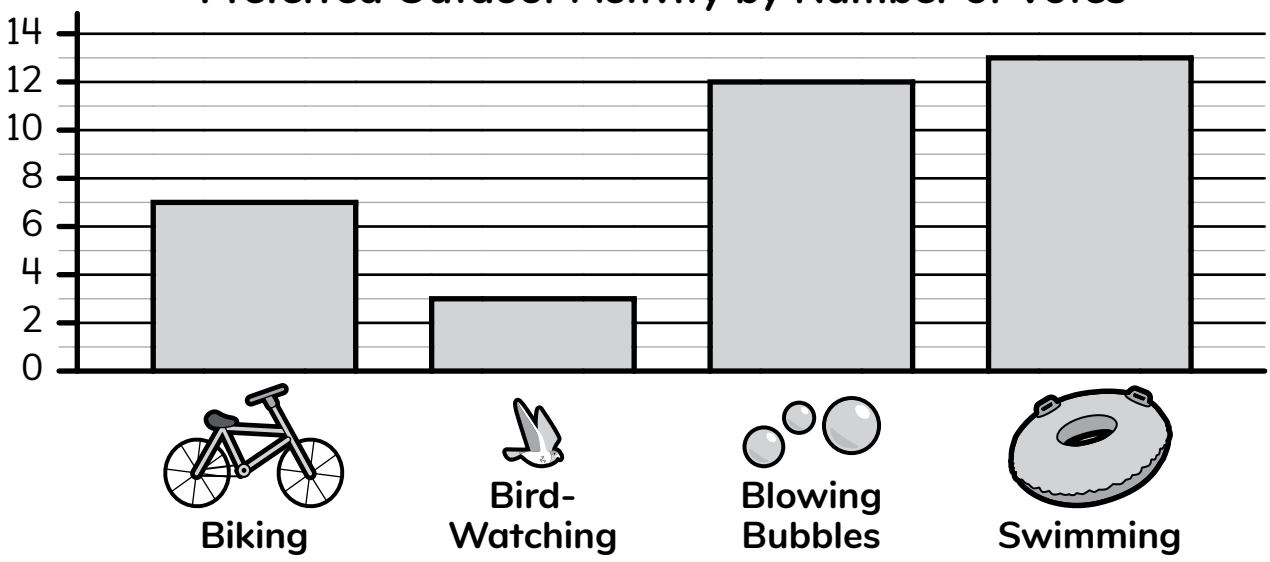
1. Compare using >, <, or =.

$200 + 20 + 2$ **>** $100 + 80 + 7$

2. Model and solve. $45 + 28 =$ **73**

Student models will vary.

3.



a) How fewer people voted for biking than swimming? **6** fewer students

b) How many more people voted for blowing bubbles than biking? **5** more students

Name: _____ Date: _____

Displaying and Explaining Collected Data About Book Preferences

1. Model and solve. $31 + 16 + 25 + 14 =$ **86**

Student models will vary.

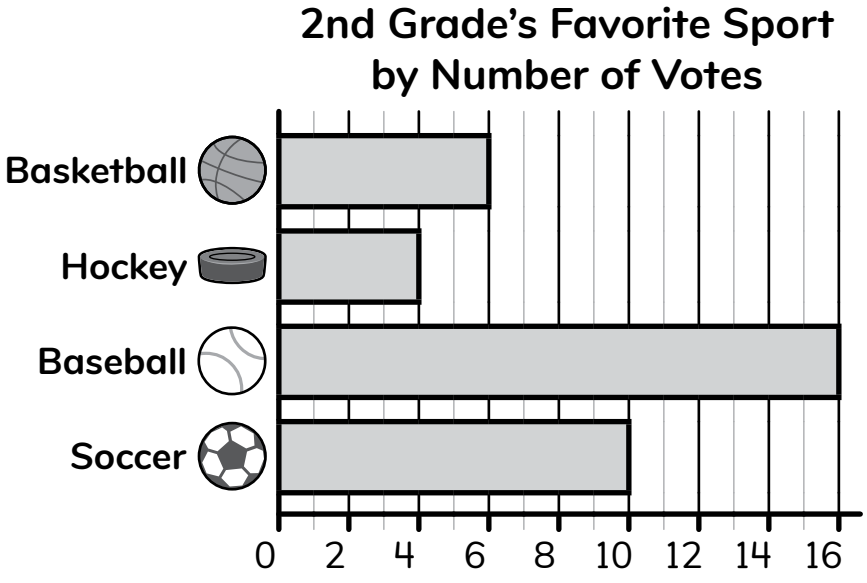
2. Model and solve. $347 - 183 =$ **164**

Student models will vary.

3. a) How many fewer students voted for basketball than soccer?

4

fewer students



b) How many students voted for hockey or soccer? Model and solve with an equation.

14 students ***4 + 10 = 14***

Student models will vary.

Name: _____ Date: _____

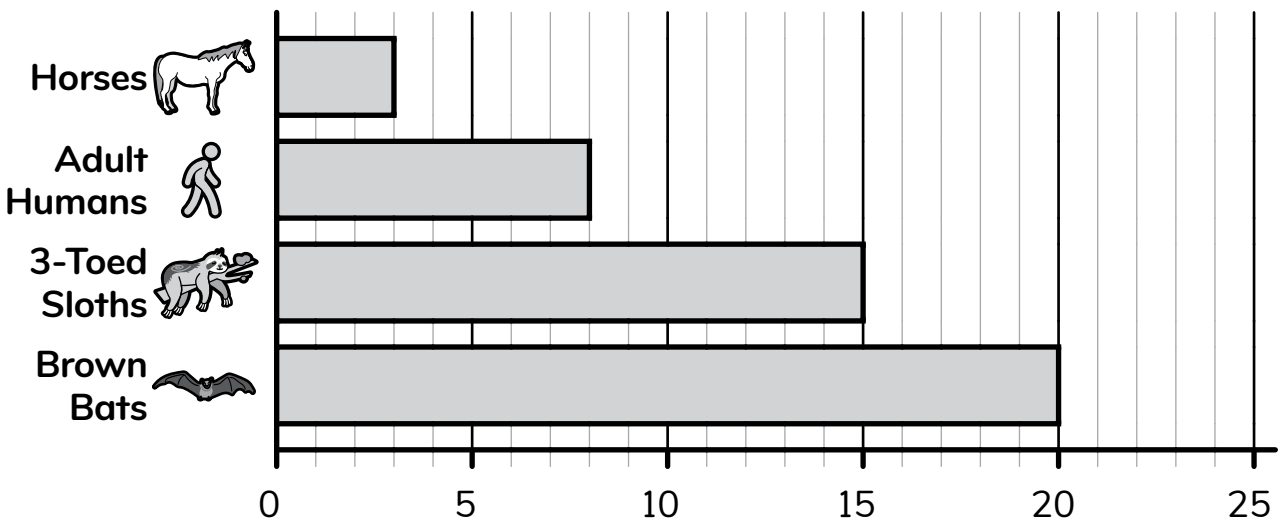
Planning and Conducting a Data Collection About Changing the School

1. What is 10 more than 700? **710**

2. Model and solve. $67 + 24 =$ **91**

Student models will vary.

3.



a) How many more hours of sleep does a brown bat get than a horse? **17** more hours of sleep

b) How many fewer hours of sleep does an adult human get than a 3-toed sloth? **7** fewer hours of sleep

Name: Date:

Displaying and Explaining Collected Data About Changing the School

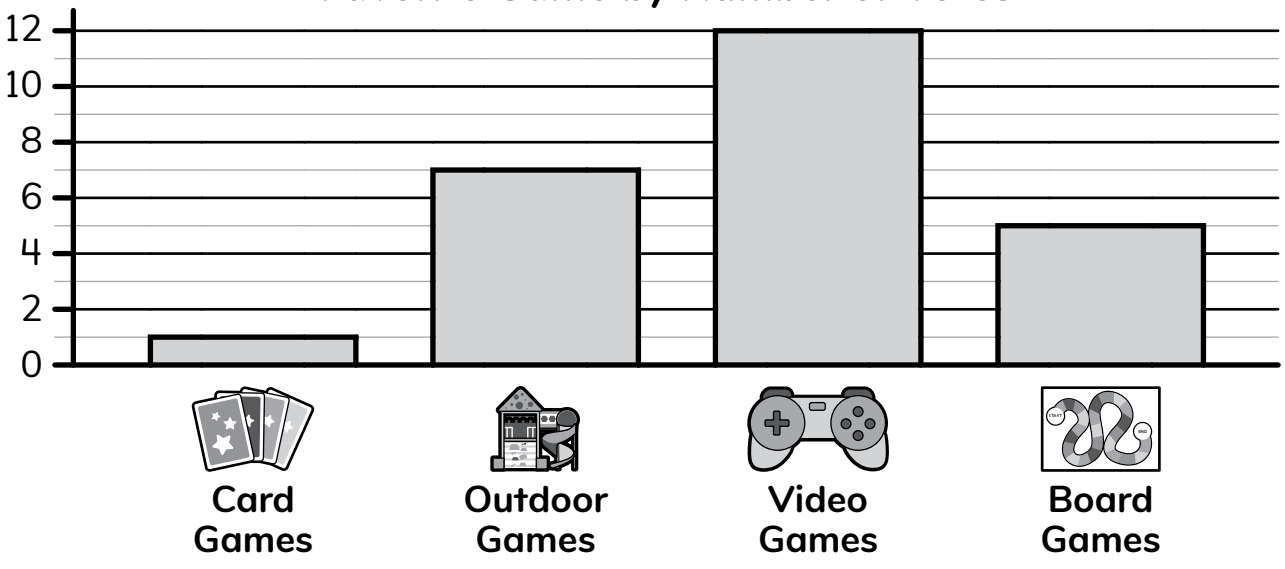
1. Model and solve. $78 - \boxed{53} = 25$

Student models will vary.

2. Model and solve. $540 + 209 = \boxed{749}$

Student models will vary.

3.



a) How many more kids voted for video games than card games? **11** fewer kids

b) How many more kids voted for board games than card games? **4** more kids

Topic 8

Counting in Groups

Recommended ST Math Objectives:

Skip Counting

Rows and Columns

Even and Odd Numbers

Name: _____ Date: _____

Making Two Equal Groups

1. Model and solve. $75 - 25 =$ **50**

Possible model:

20

5

2. Complete the equation. **25** $+ 75 = 100$

3. Look at the numbers below. Circle the numbers that can be split into 2 equal groups without any left over.

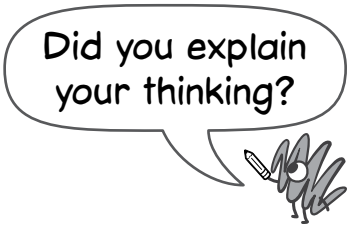
6	9	12	15	18	21	24	27

4. Isaiah and Vivi are collecting apples. They pick 14 apples in total and want to share them equally. Can they split the apples so they each get the same amount? Explain your thinking.

Yes

Possible explanation:

14 apples can be separated into 2 equal groups of 7.



Name: Date:

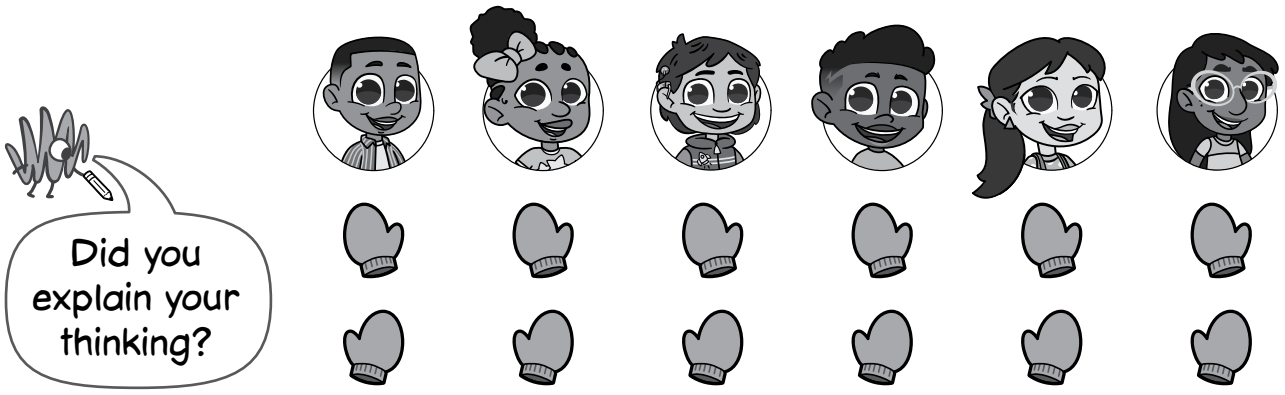
Introducing Even and Odd Numbers

1. How would you write the number 327 in expanded form?

300 + 20 + 7

2. Complete the equation. $8 + 7 = 6 +$ ***9***

3. Is there an even or odd number of mittens? Explain your thinking.



There is an even number of mittens.

Possible explanation:

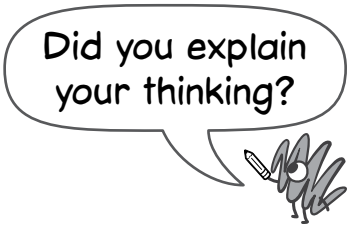
There are not mittens left over when they are put into pairs.

4. The 2nd grade class is setting up chairs for a party. There is an even number of orange chairs and an odd number of blue chairs. They want to arrange all the chairs in pairs. From which color chairs can they make pairs without any leftover chairs? Explain your thinking.

Orange

Possible explanation:

Even numbers can be separated into pairs with none left over.



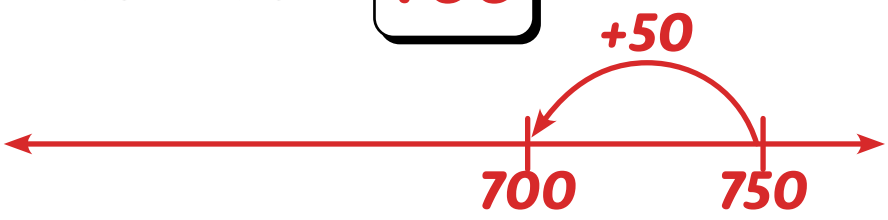
Name: _____ Date: _____


Anjali

Using Models to Identify Even and Odd Numbers

1. Model and solve. $750 - 50 = \boxed{700}$

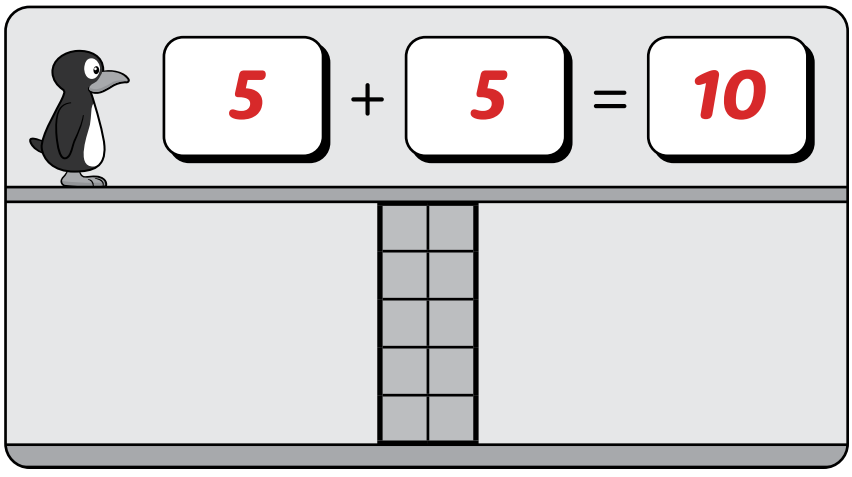
Possible model:



2. Compare using >, <, or =. $563 \; \boxed{>} \; 99$

2. Use the model to complete the equation with two equal addends.

Is the sum an odd number or an even number? Explain your thinking.

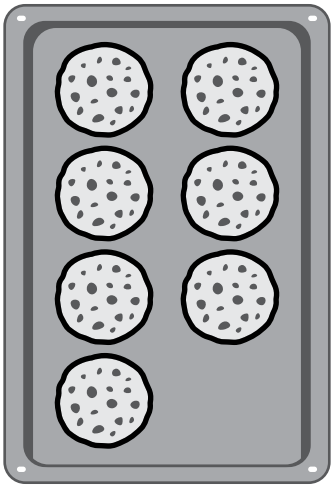


Even

Possible explanation:

The sum is an even number because the addends are equal with none left over.

2. Anjali arranged the cookies on a tray, as shown in the model. She said there is an odd number of cookies. Do you agree or disagree with Anjali? Explain your thinking.



Agree

Possible explanation:

There is a leftover cookie when they are put in pairs.

Name: _____ Date: _____

Using Number Patterns to Identify Even and Odd Numbers

1. Write the number 1,084 in expanded form.

   1,000 + 80 + 4

2. Complete the equation. $13 = 19 - \boxed{6}$

3. Look at the numbers below.
   Identify whether each number is even or odd.

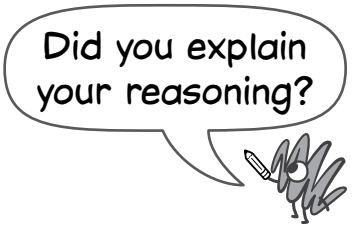
14	***even***	50	***even***
27	***odd***	61	***odd***
32	***even***		

4. Students are playing a number card game. When a student picks a number card, they need to decide if the number is even or odd without drawing a model. If a student picks the number card 46 out of a pile, how can they decide if the number is even or odd? Explain your thinking.

46 is even.

Possible explanation:

If the digit in the ones place is 0, 2, 4, 6 or 8, the number is even.



Name: Date:

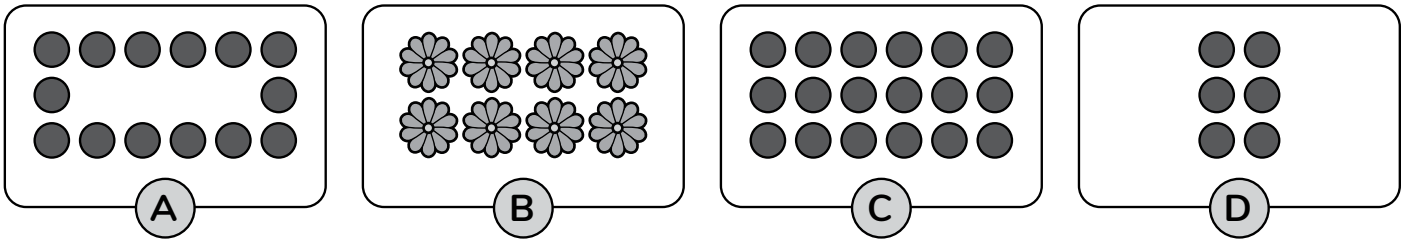
Introducing Arrays

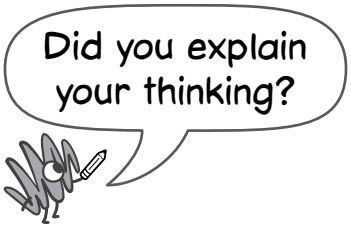
1 Model and solve. $352 - 45 = \boxed{307}$

Possible model:

2 Complete the equation. $10 + 3 = 9 + \boxed{4}$

2 Which models show an array? Explain your thinking.



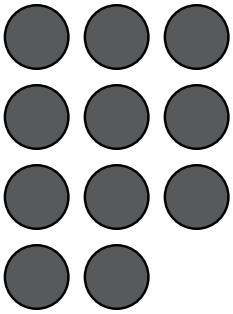


B, C, and D are arrays.

Possible explanation:

The objects in arrays are arranged in equal rows.

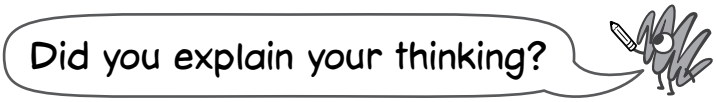
2 A critter arranged the counters as shown in the model below. The critter says these counters are in an array. Do you agree or disagree with the critter? Explain your thinking.



Disagree.

Possible explanation:

The last row does not have the same number of counters as the other rows.



Name: Date:


Isaiah

Relating Skip Counting to the Array Structure

1. Look at the number below.

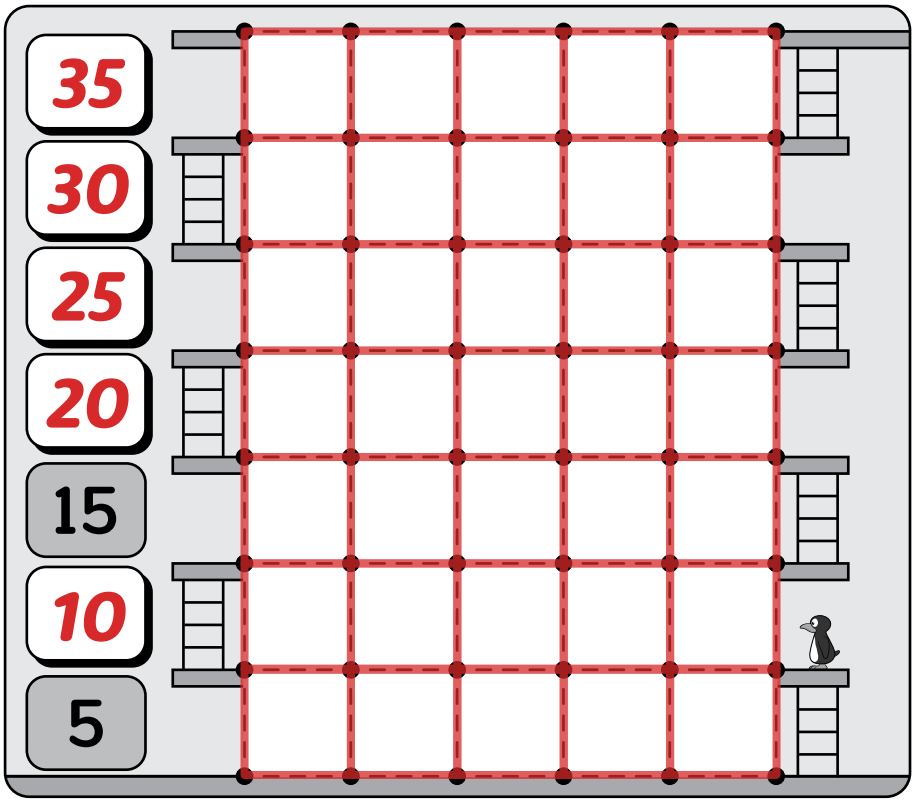
462 Which digit is in the hundreds place? **4**

2. Complete the skip counting pattern.

100, 200, **300**, 400, 500, **600**

3. Use the model to complete the skip counting pattern.

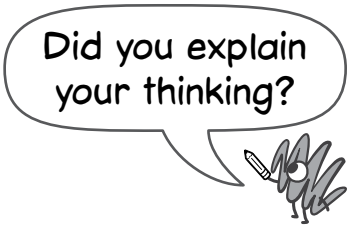
This staircase is skip counting by **5**.



1. Isaiah wants to skip count from 0 to 30 as quickly as possible. Should he skip count by 2, 5, or 10? Explain your thinking.

10

Student explanations will vary.

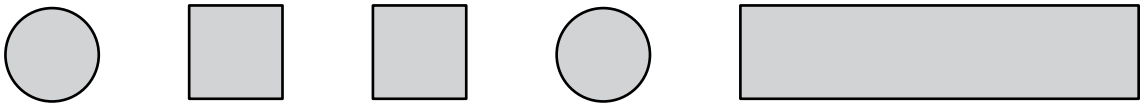


Name: Date:

Matching Arrays, Skip Counting Patterns, and Repeated Addition Equations

1. How many squares are below?

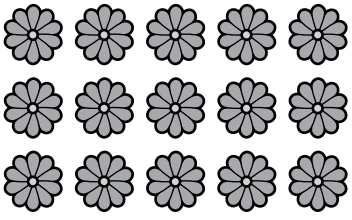
2



2. Model and solve. $95 - \boxed{40} = 55$

Possible model:

3. Write an equation to represent the flower array.

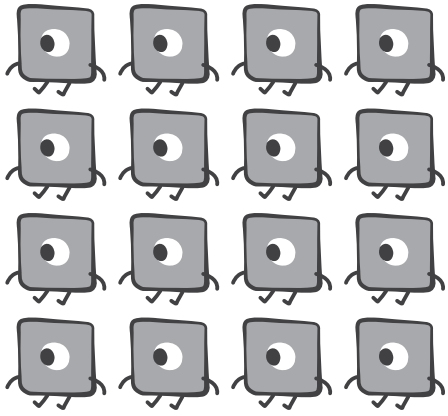


$\boxed{5} + \boxed{5} + \boxed{5} = \boxed{15}$ flowers

4. The critters arranged themselves into the array. How many critters are in the array? Solve with a repeated addition equation.

16 critters

4 + 4 + 4 + 4 = 16



Name: _____ Date: _____


Miles

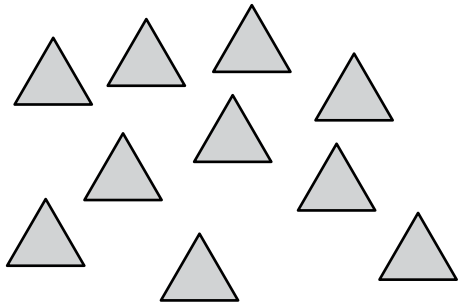
Creating Different Arrays for the Same Total

1. Model and solve. $22 + \boxed{76} = 98$

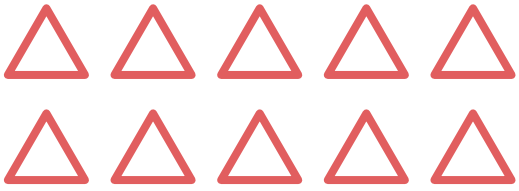
Possible model:

2. Compare using >, <, or =. $94 + 1 + 1 \; (<) \; 101$

3. Arrange these 10 triangles into an array.
Write an addition equation to represent the array.

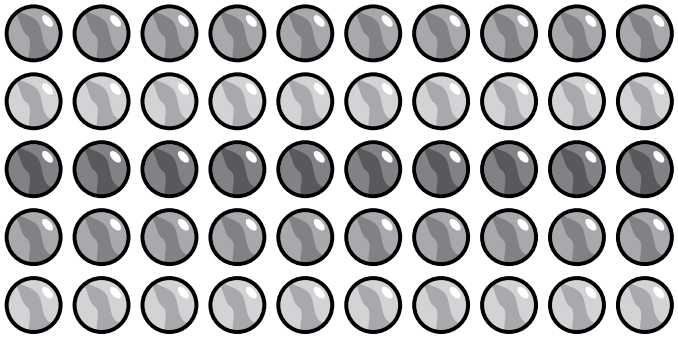


Possible answer:



5 + 5 = 10

4. Miles arranges his collection of marbles into the array shown below.
How many marbles are in his collection? Solve with a repeated addition equation.



50 marbles

Possible equation:

10 + 10 + 10 + 10 + 10 = 50

Name: _____ Date: _____


Isaiah

Using the Array Structure to Find the Total of Objects

1. Fill in the missing numbers.

63 = **6** tens and **3** ones

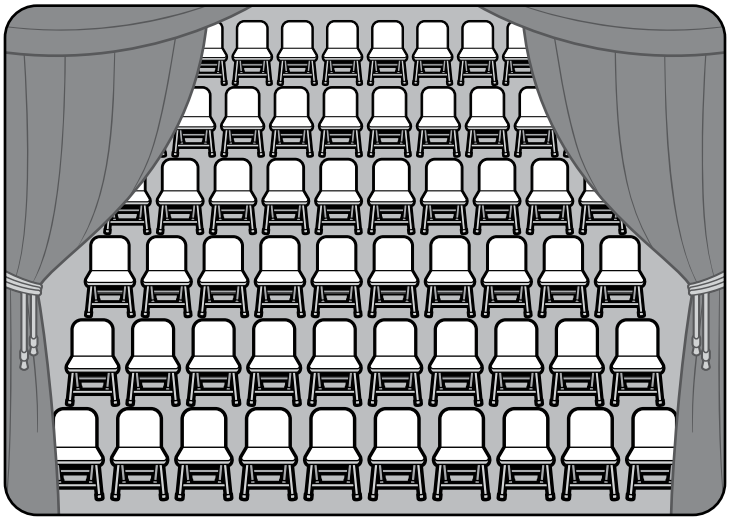
27 = **2** tens and **7** ones

2. Model and solve.

273 + 541 = **814**

Student models will vary.

3. Isaiah set the chairs up in the auditorium in an array. He put same number of chairs in each row. How many rows are in the array? How many chairs are in each row?



6 rows are in the array.

10 chairs are in each row.

4. Use the model and your work from Problem 3. How many chairs are in the array? Solve with a repeated addition equation.

60 chairs

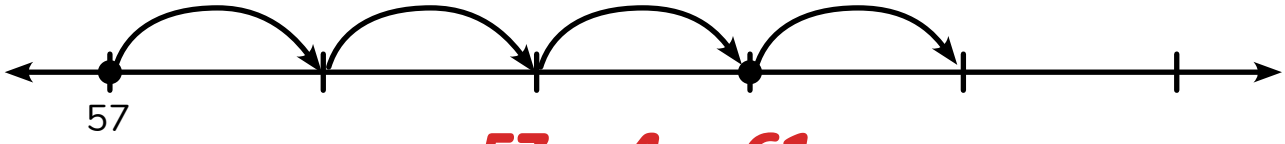
Possible equation:

10 + 10 + 10 + 10 + 10 + 10 = 60

Name: Date:

Introducing Area

1. What equation does the number line represent?



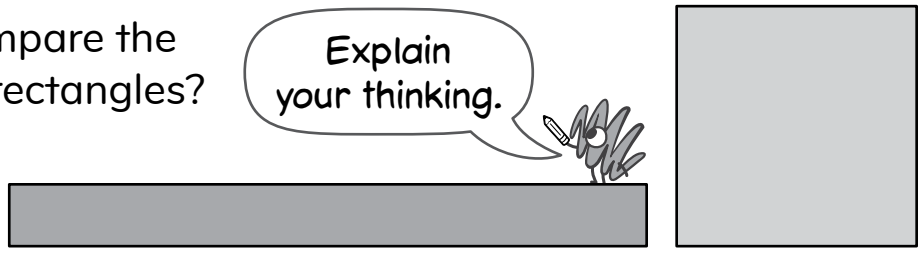
57 + 4 = 61

2. How can you decompose 468 into two parts?

Possible answers:

1	hundreds	***3***	hundreds
2	tens	***4***	tens
5	ones	***3***	ones

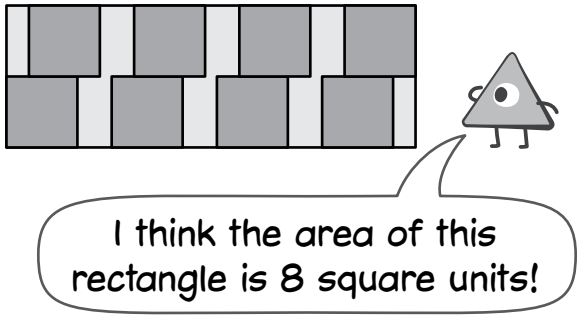
3. How could you compare the area of these two rectangles?



Possible answers:

- ***say they can cut out the rectangles and try overlapping them to see if one fits inside the other.***
- ***say they can decompose one rectangle by cutting it into pieces to see if the pieces will fit inside the other rectangle.***
- ***say they can use smaller square units to fill the rectangles to see which fits more square units.***

4. What error did the critter make? How can it be fixed?



Possible answers:

The critter left gaps in the square units, so the answer of 8 is lower than the real answer. To fix it, the critter should align the square units so they are touching.

Name: Date:

Introducing Scaled Pictographs

Student answers will vary.

1 What digit could make the inequality true?

7 0 ☐ < 705

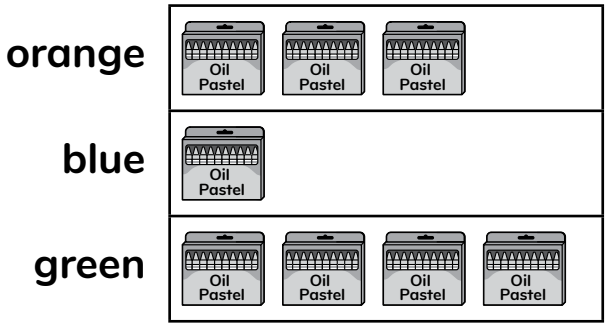
249 < 2 ☐ 0

650 > ☐ 6 0

3 1 ☐ < 705

2 How many oil pastels are there of each color?

Oil Pastels In School

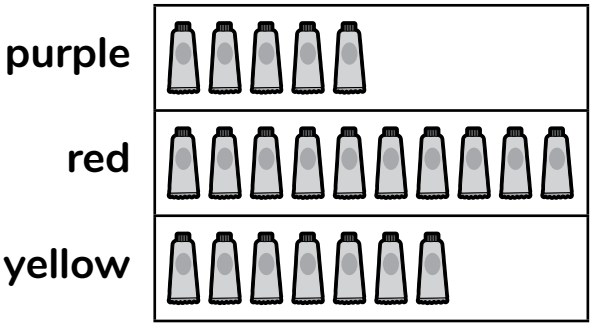


Key: Oil Pastel = 10 oil pastels

orange	blue	green
30	10	40

3 Write one true and one false statement about the data in the pictograph below.

Paint At Home



Key: = 1 paint tube

True Statement

Possible answers:

There are more red paint tubes than yellow or purple paints.

There are 22 total paint tubes at home.

There are 5 purple paint tubes.

False Statement

Possible answers:

There are 9 red paint tubes.

There are the same number of yellow paint tubes as purple paint tubes.

Name: Date:

Introducing Scaled Bar Graphs

1. Solve. $21 + 22 + 25 + 20 =$ **88**

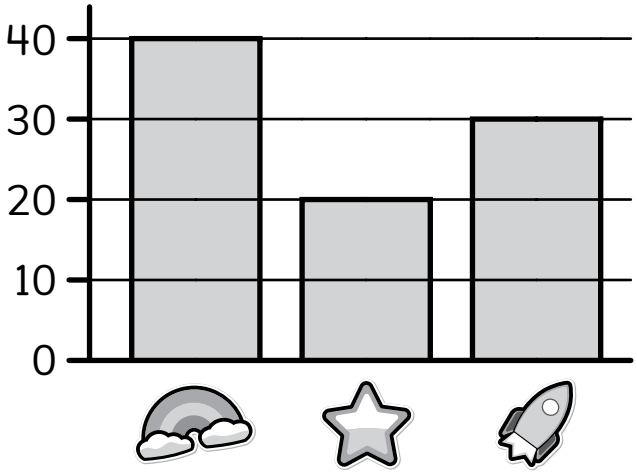
Possible strategy:
20 + 20 + 20 + 20 = 80
1 + 2 + 5 = 8

2. Arrange these numbers in order from least to greatest:
824, 842, 428, 482

428 **482** **824** **842**

3. Interpret data from the bar-type graph to complete the table.

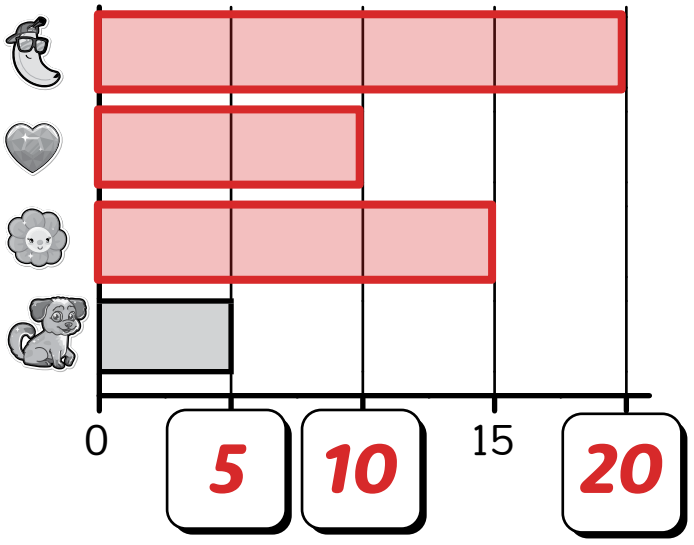
Number of Stickers By Type



Type of Sticker	Number of Stickers
	**40**
	**20**
	**30**

4. Use the data to the table to complete the rest of the bar-type graph.

Number of Stickers By Type



Type of Sticker	Number of Stickers
	20
	10
	15
	5

Topic 9

Building Financial Literacy

Recommended ST Math Objectives:

Using Money

Money Place Value

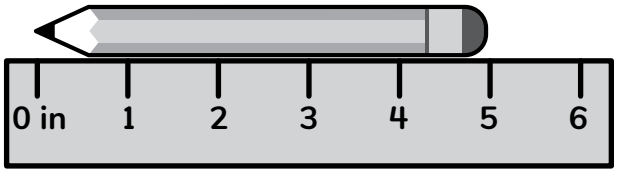
Two-Step Situations

Name: Date:

Determining Values of Sets of Mixed Coins

1. How long is the pencil?

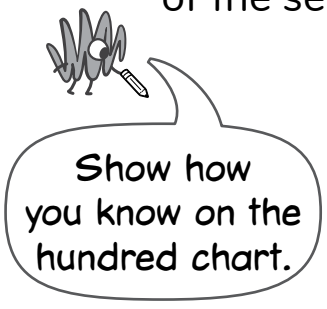
about **5 inches**



2. Rewrite the expression using only two numbers.

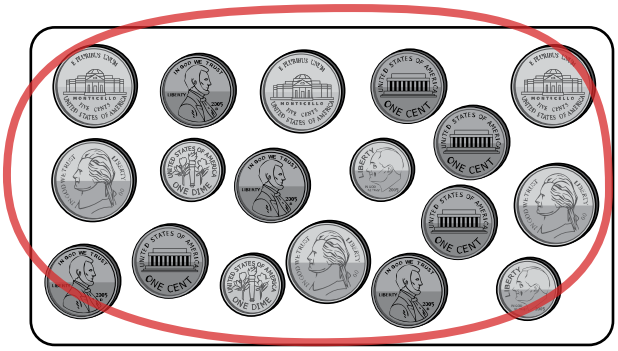
$47 + 10 + 10 + 10 =$ **47 + 30**

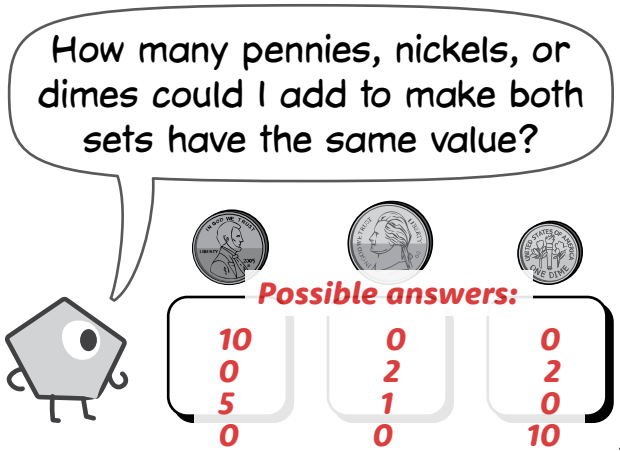
3. What is the value of the set of coins? **48¢**



1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

4. Which set of coins has a value of 73¢?





Name: _____ Date: _____


Miles

Determining Values with Quarters

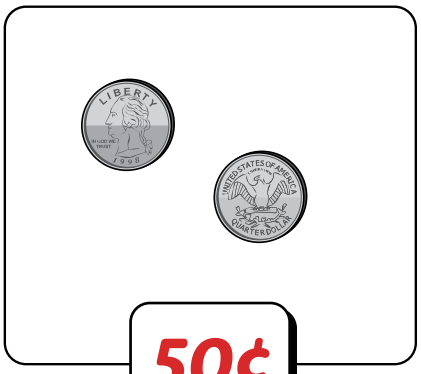
1. Count by 100 to fill in the missing numbers.

100, 200, **300**, **400**, **500**, **600**, 700

2. The number 236 can be made with

2 hundreds, **3** tens, and **6** ones.

3. What is the value of each set of coins?


50¢


38¢

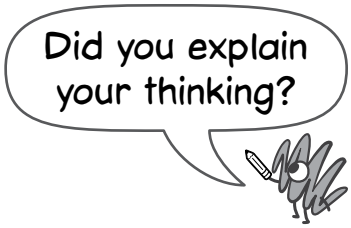

60¢

4. Miles has the collection of coins shown below. He wants to buy a banana that costs 25¢. Circle the coins Miles could use to buy a banana. Explain your thinking.

Possible answer:

Possible explanation:

The value of 2 dimes is 20 cents and the value of 1 nickel is 5 cents. 20 cents and 5 cents makes 25 cents.



Name: _____ Date: _____

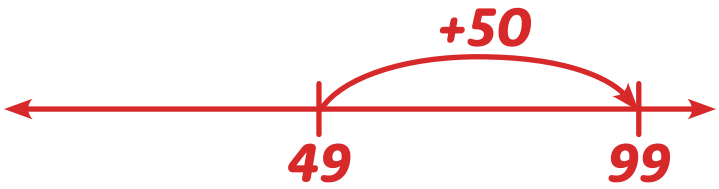

Aarifa

Determining Values Equivalent to One Dollar

1. Model and solve.

$49 + \boxed{50} = 99$

Possible model:



2. Model and solve.

$831 - 247 = \boxed{584}$

Student models will vary.

3. What is the value of each set of coins?
Use a dollar sign and decimal point in your answer.

4. Aarifa's collection of coins is shown below. She needs $1.00 to pay for a treat at the bake sale. Circle the coins Aarifa could use to buy the treat. Explain your understanding.

Possible answer:

Possible explanation:

The value of 2 quarters is 50 cents. The value of 4 dimes is 40 cents. The value of 2 nickels is 10 cents. 50 cents, 40 cents, and 10 cents makes 100 cents, which is $1.00.

Name: _____ Date: _____

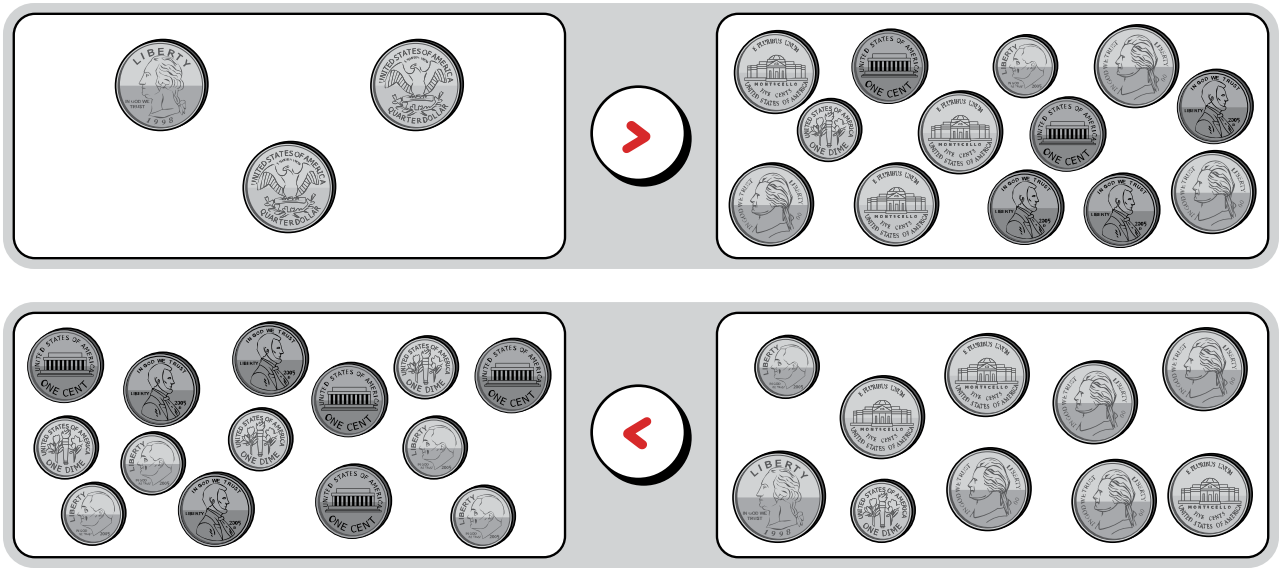
Solving Addition and Comparison Word Problems Involving Money

1. Compare using >, <, or =. $35 \bigcirc 30 + 4$ — **>**

2. Continue skip counting.

10, 20, 30, 40, **50**, **60**, **70**, 80

3. Compare the value of each set of coins using >, <, or =.

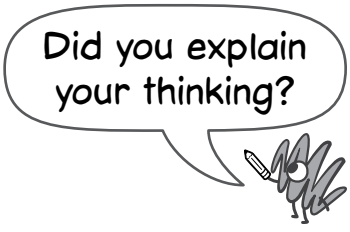


4. Vivi has 2 quarters and 1 dime in her piggy bank. She adds 2 dimes, 2 nickels, and 6 pennies to her piggy bank. What is the value of the coins in her piggy bank? Write your answer using the dollar sign and a decimal point. Explain your thinking.

$0.96

Possible explanation:

The value of 2 quarters is 50 cents. The value of 1 dime is 10 cents. The value of 2 dimes is 20 cents. The value of 2 nickels is 10 cents. The value of 6 pennies is 6 cents. 50 cents, 10 cents, 20 cents, 10 cents, and 6 cents totals 96 cents, which can be written as $0.96.



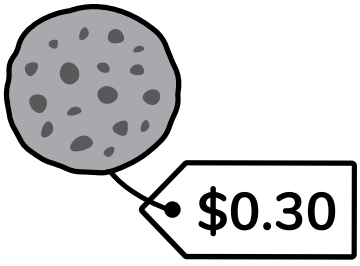
Name: _____ Date: _____

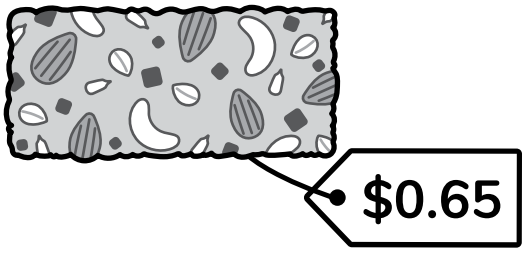
Solving Subtraction Word Problems Involving Money

1. What is 10 more than 500? **510**

2. What is 10 less than 500? **490**

3. Vivi's collection of coins is shown below. If she buys a granola bar from the bake sale, how much money will she have left?





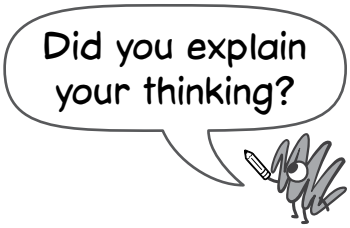
35 cents left

4. Miles has 2 quarters, 1 dime, and 3 nickels. A muffin at the bake sale costs $0.70. Does Miles have enough money to pay for a muffin? Explain your thinking.

Yes

Possible explanation:

Miles's collection of coins has a value of 75 cents, which is more than the cost of a muffin.



Name: _____ Date: _____


Aarifa

Depositing and Withdrawing Money

1. What is the value of the set of coins?

Write the value using the dollar sign. **$1.00**

Write the value using the cent sign. **100¢**

2. Decide if each example is a time you would withdrawal money or deposit money.

Example	Withdrawal	Deposit
Babysitting for a neighbor		✓
Aarifa buying a new video game to play with her brothers	✓	
Getting money for a birthday		✓
Going to the movie theater	✓	
Buying a drink at a lemonade stand	✓	

Spending money requires you to make a **withdrawal** / **deposit** .

3. Aarifa needs a new part for the robot she is building with her dad. She has $15, and deposits $5 every week from chores. The part she needs for her robot costs $35. How many weeks will it take Aarifa to save $35? **4 weeks**

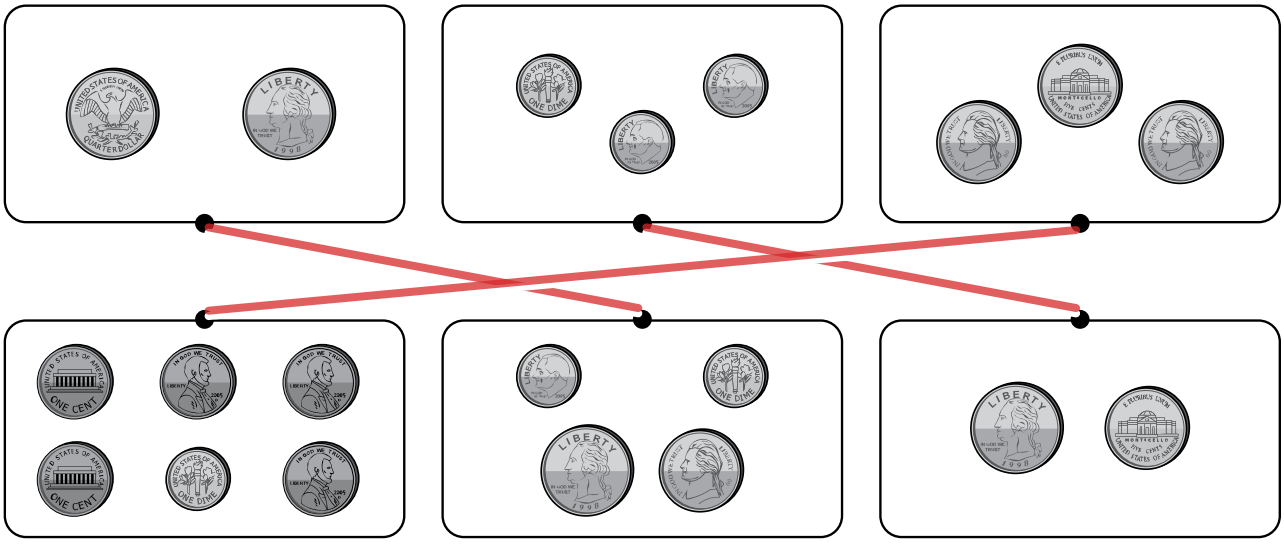
	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6
Deposit	$5	$5	$5	$5	$5	$5
Total Money	$20	$25	$30	$35	$40	$45

Name: _____ Date: _____


Aarifa

Borrowing and Lending Money

1. Draw a line to match each set of coins to a set with the same value.



2. Circle the word that describes each sentence.

a) Allowing someone to borrow something.

lend **borrow**

b) Using something that belongs to someone else with permission and the intention of returning it.

withdrawal **lend** **deposit** **borrow**

3. Aarifa asked to borrow her brother's video game to take to a friend's house. The last time Aarifa borrowed something from her brother, she broke it and did not tell her brother. Do you think Aarifa's brother should lend her the video game? Explain your reasoning.

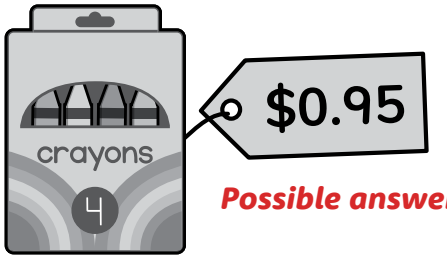
Possible answer:

No because the last time Aarifa borrowed something, she was not a responsible borrower. Aarifa might break the video game if she borrows it.

Name: Date:

Identifying Producers and Consumers

1. What combination of coins could you use to buy crayons?



Possible answers:

2. Identify each example as a time someone is a producer or consumer.

Example	Producer	Consumer
A veterinarian	✓	
Paying for a haircut		✓
An author	✓	
Creating a piece of artwork	✓	
Buying a piece of artwork		✓

3. How much money was spent on bake sale supplies? Show how you know.

Bake sale supply	Flour	Sugar	Chocolate	Bags
Cost	$5	$3	$7	$3
Total Spent	$18			

Possible strategy for solving: 7 + 3 = 10

10 + 5 + 3 = 18

Topic 10

Exploring Shapes and Time

Recommended ST Math Objectives:

Shapes

Time

Partitioning into Equal Shares

Name: Date:

Using Defining Attributes to Name Polygons

1. Use >, =, or <.

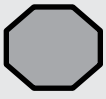
4 tens and 3 ones **<** 42 ones

2. 512 can be represented with 5 hundreds, 1 ten, and 2 ones. What is another way to represent 512?

Possible answer:

4 hundreds, 11 tens, and 2 ones

3. Complete the table.

Shape Name	Example	Number of Sides	Number of Verticies
triangle		*3*	*3*
pentagon		*5*	*5*
hexagon		*6*	*6*
octagon		*8*	*8*

4. Marcus is making a shape collage. He cuts out 2 triangles, 3 quadrilaterals, 1 hexagon, and 1 octagon. How many vertices are in all the shapes combined?

32 vertices

3 + 3 + 4 + 4 + 4 + 6 + 8 = 32

Name: _____ Date: _____


Isaiah

Drawing Polygons Given One Attribute

1. Look at the number below.

356 Which digit is in the hundreds place? **3**

2. Complete the skip counting pattern.

35, 40, **45**, 50, 55, **60**

3. Draw and name the polygons.

A

Draw a shape with **3 sides** and **3 vertices.**

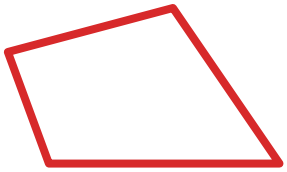
Possible drawing:

triangle

B

Draw a shape with **4 sides** and **4 vertices.**

Possible drawing:

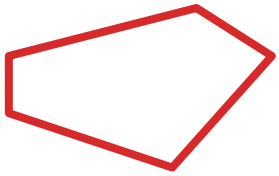


quadrilateral

C

Draw a shape with **5 sides** and **5 vertices.**

Possible drawing:



pentagon

3. Anjali is collecting leaves for her science project. She finds 63 maple leaves and 19 oak leaves. How many leaves does Anjali find in all? Model and solve with an equation.

	82
19	***63***

Student models and equations will vary.

63 + 19 = 82

82 leaves

Name: _____ Date: _____


Miles

Drawing Polygons Given More than One Attribute

1. Complete the equation. $43 + \boxed{7} = 50$

2. Model and solve. $381 + 381 = \boxed{762}$

Student models will vary.

3. Use your ruler to draw the following polygons.

A

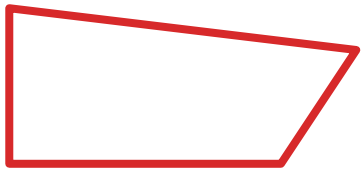
Draw a triangle with one side length of 4 cm.

Possible drawing:

B

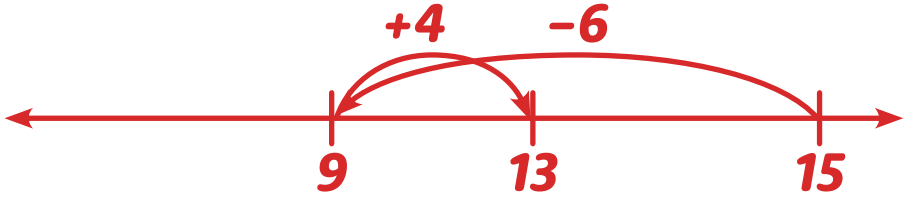
Draw a polygon with 4 sides and 1 right angle.

Possible drawing:



4. Miles has 15 toy cars in his collection. He gives 6 cars to his friend. Then, he buys 4 new cars to add to his collection. How many toy cars does he have now? Draw a model to solve.

Possible model:



3 toy cars

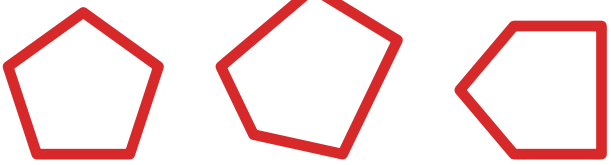
Name: Date:

Identifying Attributes and Composing 3-D Shapes

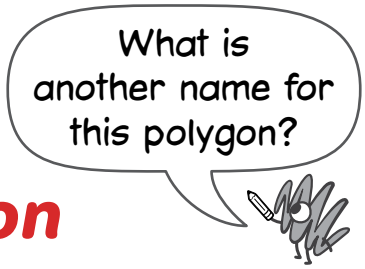
1. What number has 13 tens, 2 hundreds, and 21 ones? **351**

2. Draw a polygon with 5 sides and 5 vertices.

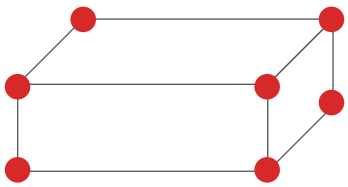
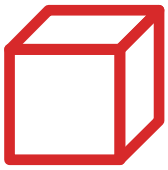
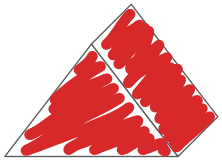
Possible answers:



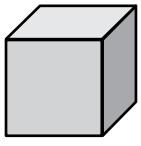
pentagon



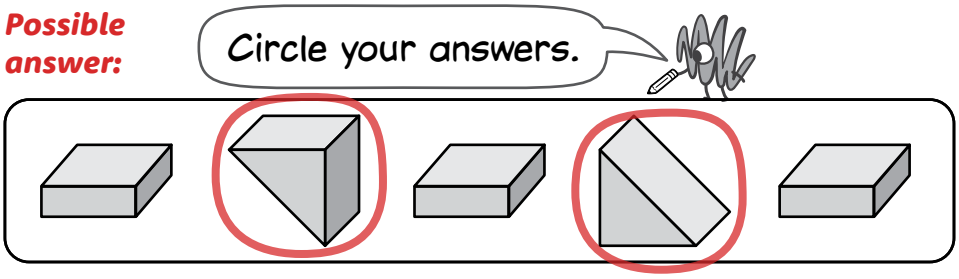
3. Draw where you see the given attribute and name the shape you see.

Attribute	3-D Shape	Shape Name
Verticies		***Rectangular prism***
Edges		***Cube***
Faces		***Triangular prism***

4. Which 3-D shapes could you use to compose a cube?



Possible answer:

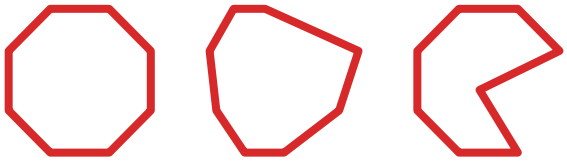


Name: Date:

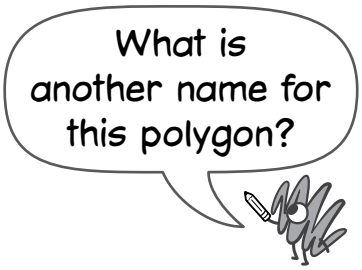
Sorting And Classifying 3-D Shapes

1. Draw a polygon with 8 sides and 8 vertices.

Possible answers:



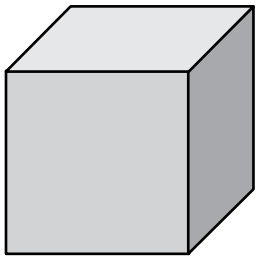
octagon



2. Solve. 797 + 203 = **1,000**

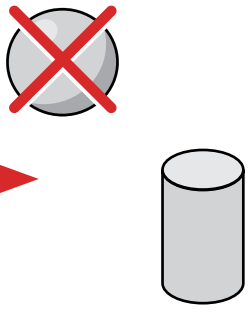
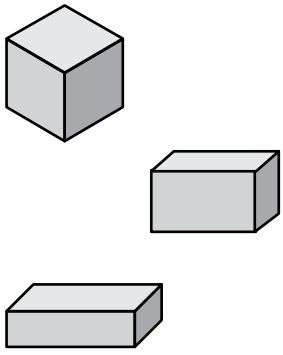
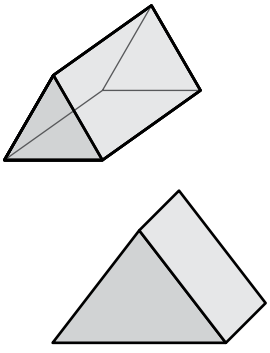
700 + 200 = 900
97 + 3 = 100
900 + 100 = 1,000

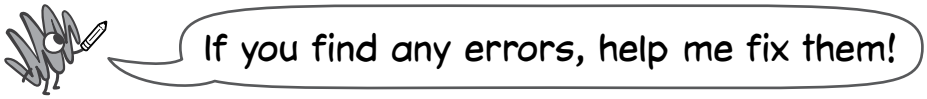
3. What names can you use to describe this 3-D shape? Why?



This is a cube and a special rectangular prism because cubes and rectangular prisms are both made from square faces, and squares are special rectangles.

4. Did the critter sort these shapes correctly? **Yes** **No**

no faces	circle faces	rectangle faces	triangle faces
			



Name: _____ Date: _____

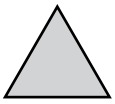

Lillian

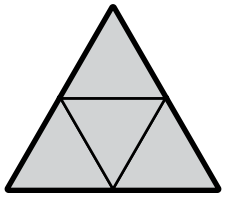
Naming Equal-Sized Parts of a Whole

1. Complete the skip counting pattern.

170, 180, **190**, **200**, **210**, **220**

2. 50 + 50 = **100**

3. This  is one part of the whole.



a) What shape was made?

triangle

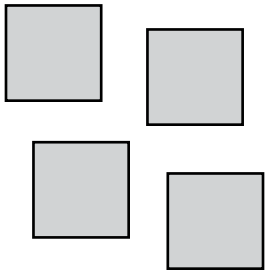
b) How many equal parts were used to make one whole?

4

c) What is the name for each equal part?

fourth

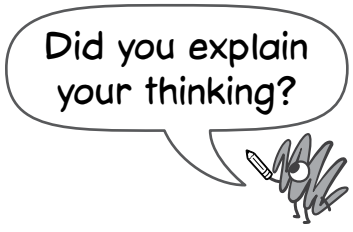
4. Lillian was given the shapes below. She said that she could make a rectangle with the shapes. Do you agree or disagree? Explain your thinking.



Agree

Possible explanation:

Lillian could line the four shapes up, side by side, to make a rectangle.



Name: _____ Date: _____


Aarifa

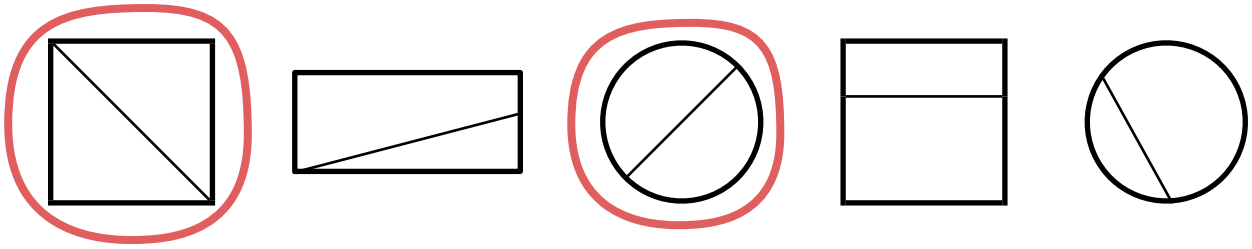
Partitioning Circles and Rectangles into Halves and Fourths

1. 100 – 50 = **50**

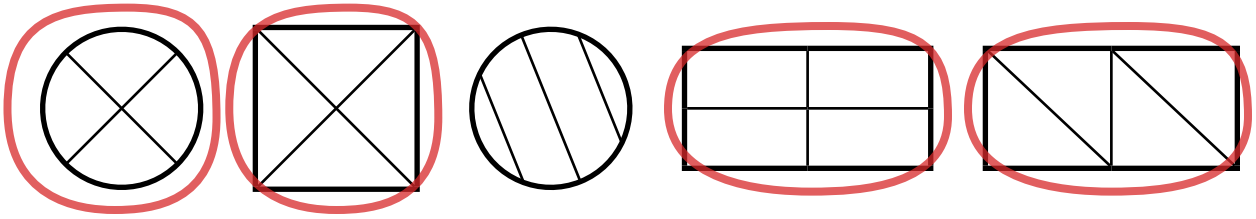
2. Use >, =, or <. 50 + 50 **=** 100

3. Which show equal parts?

   a) Circle the shapes that show halves.



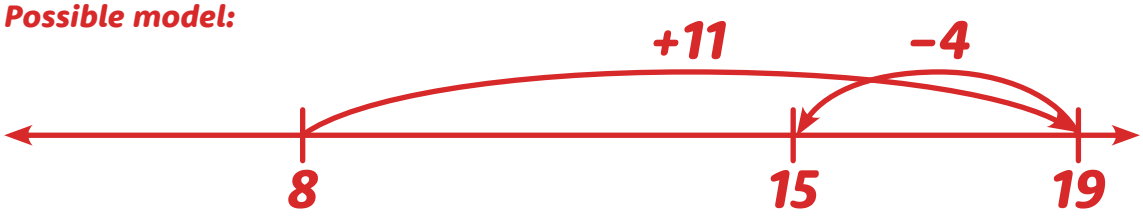
   b) Circle the shapes that show fourths.



4. Aarifa had 8 green marbles and 11 blue marbles her collection. She lost 4 marbles at the playground. How many marbles does Aarifa have now? Draw a model to solve.

15 marbles

Possible model:



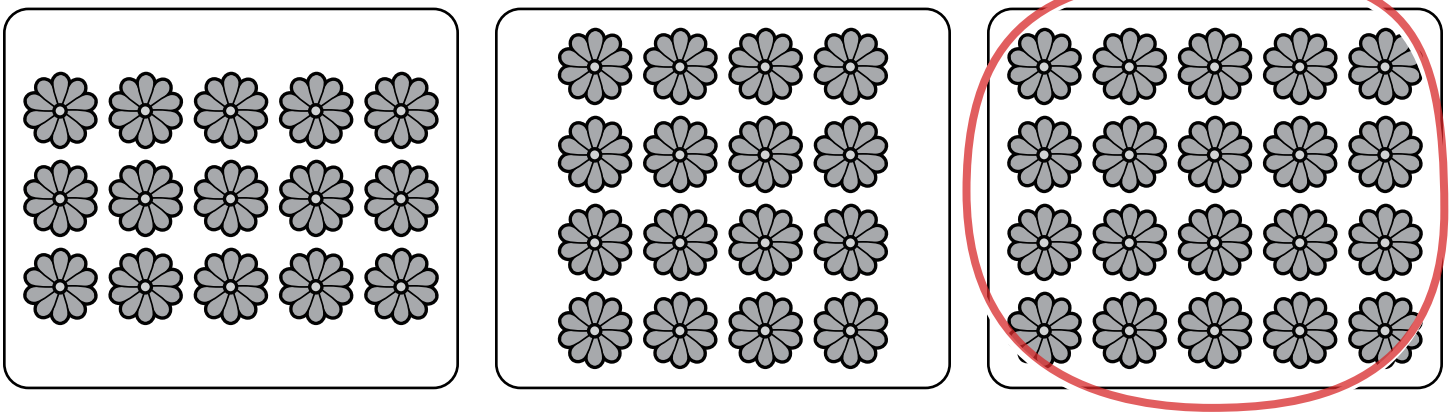
Name: _____ Date: _____

Introducing Eighths

1. What unit would you use to measure the marker?

meters **feet** **inches**

2. Which array has 20 flowers?



3. a) What is a half of a half?

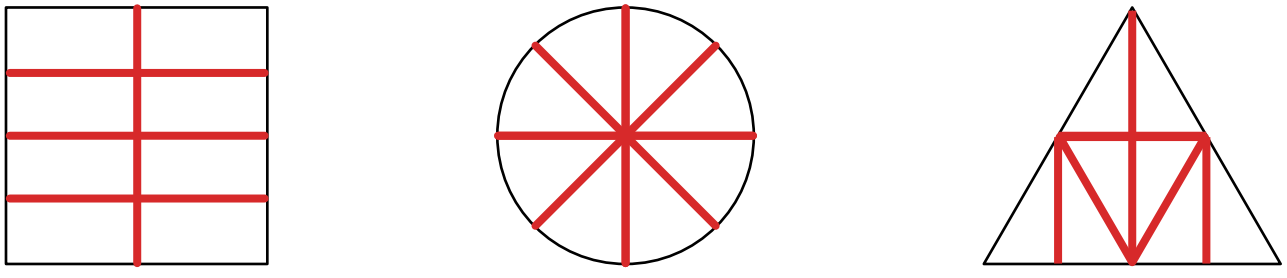
half **fourth** **eighth**

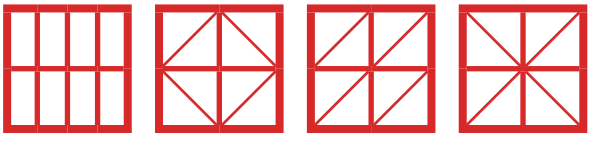
b) What is half of a fourth?

half **fourth** **eighth**

4. Partition each shape into eighths.

Possible answers:





Name: _____ Date: _____


Isaiah

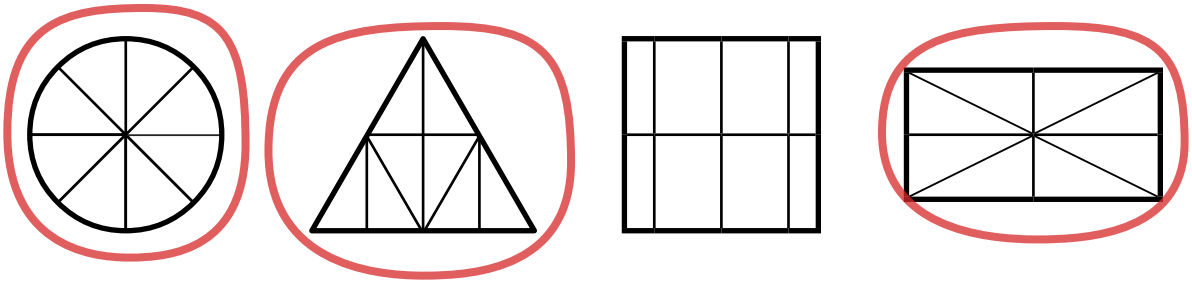
Partitioning Circles and Rectangles Into Eighths

1. $12 + 5 =$ **17**

2. Complete the skip counting pattern.

   24, 26, **28**, **30**, **32**, **34**

3. Circle the shapes that show eighths.

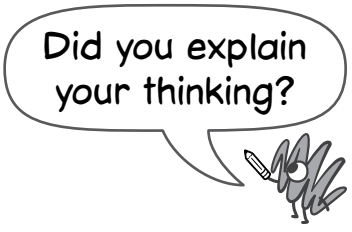


4. Isaiah has 1 quarter, 5 dimes, and 2 nickels in his piggy bank. He wants to buy a cup of lemonade for 30 cents. Isaiah wants to use only 2 coins. Which coins should Isaiah use to pay for the cup of lemonade? Explain your thinking.

1 quarter and 1 nickel

Possible explanation:

The value of 1 quarter is 25 cents and the value of 1 nickel is 5 cents. 25 cents and 5 cents make 30 cents.



Name: _____ Date: _____

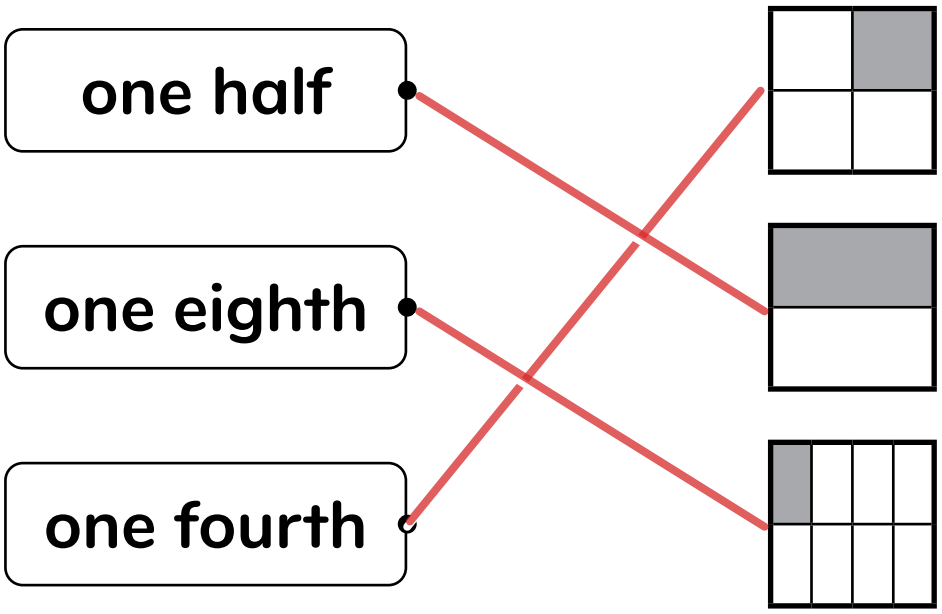

Isaiah

Iterating Equal-Sized Parts to Create Fractions Equal To or Greater Than One Whole

1. Complete the equation. $5 + \boxed{5} = 10$

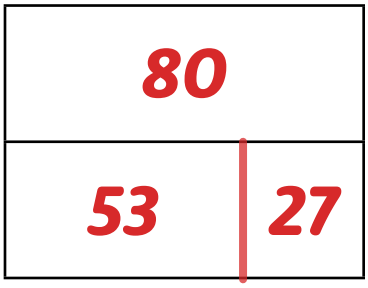
2. Complete the equation. $48 + \boxed{52} = 100$

3. Draw a line to match each label to the shape it describes.



4. Isaiah collected 80 leaves from his front yard. He used some leaves for his art project. Now he has 53 leaves. How many leaves did Isaiah use for his art project? Model and solve with an equation.

Possible model and equation:



$53 + \boxed{27} = 80$

$\boxed{27}$ leaves

Name: _____ Date: _____


Lillian

Telling and Writing Time to the Nearest Half-Hour and Quarter-Hour

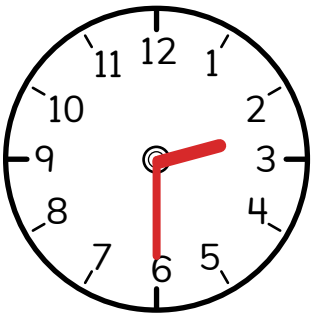
1. Write the number 950 in expanded form.

900 + 50

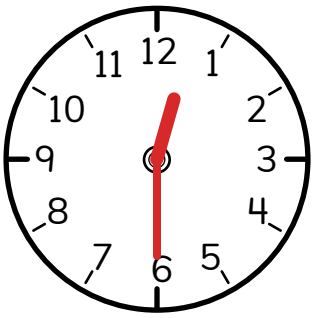
2. Model and solve. 145 + 628 = **773**

Student models will vary.

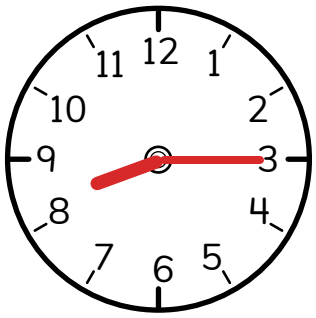
3. Draw the hour and minute hands on the clock to show the time.



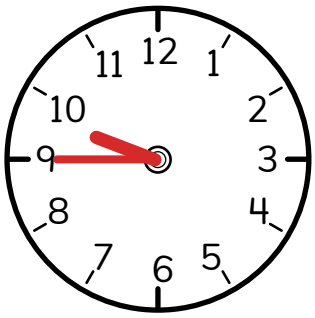
half past 2



half past 12

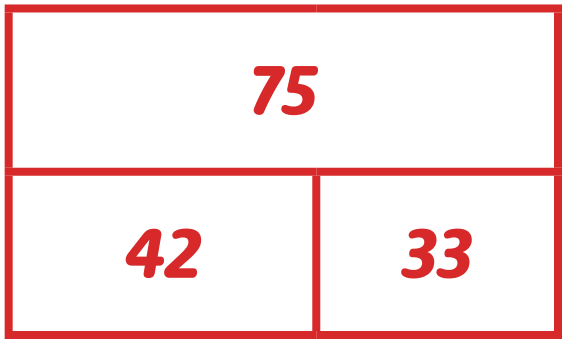


quarter past 8



quarter to 10

4. Lillian picked 75 berries. 42 were strawberries.
The rest were raspberries. How many raspberries did Lillian pick?
Model and solve with an equation.



Student models and equations will vary.

75 – 42 = 33

33 raspberries

Name: _____ Date: _____


Miles

Relating Minutes to the Hour on Analog Clocks

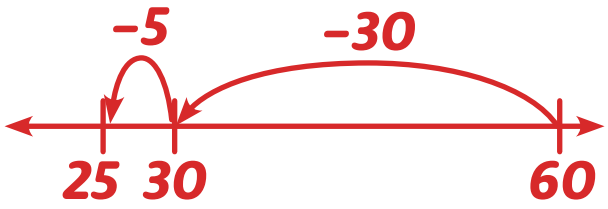
1. Count by 5s starting from 20. Write the next four numbers:

20, **25**, **30**, **36**, **40**

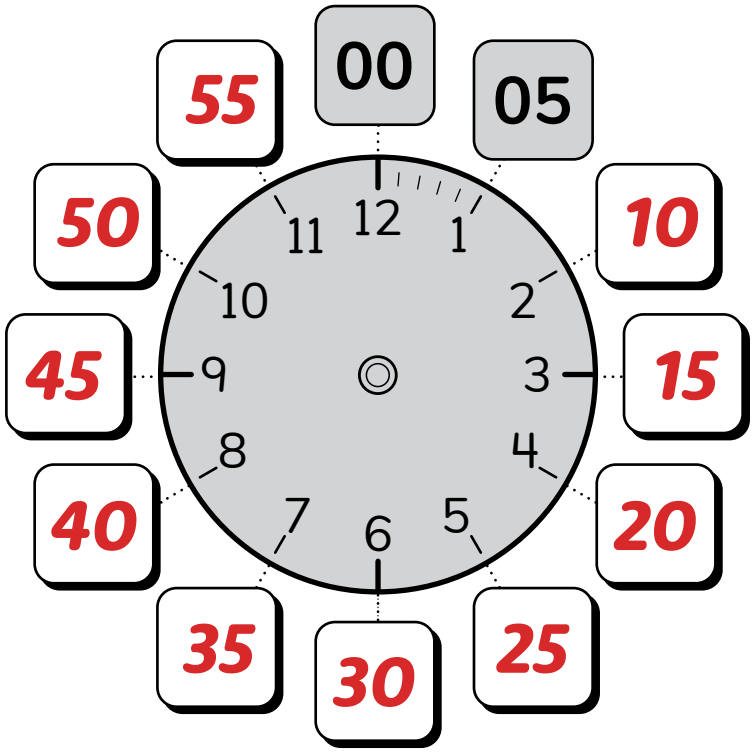
2. Model and solve.

60 − 35 = **25**

Possible model:



3. How many minutes does each number on the clock represent?



4. Miles had a jar filled with 67 marbles. He accidentally knocked the jar over, and the marbles spilled all over the floor. He picked up 49 marbles. How many marbles are still missing? Model and solve with an equation.

Student models and equations will vary.

67	
49	18

67 − 49 = 18

18 marbles

Name: _____ Date: _____

Telling and Writing Time to the Nearest Five Minutes

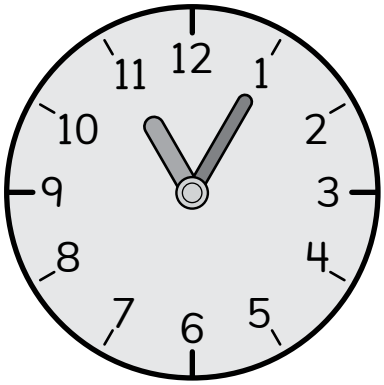
1. Complete the skip counting pattern.

65, 70, **75**, **80**, **85**, **90**

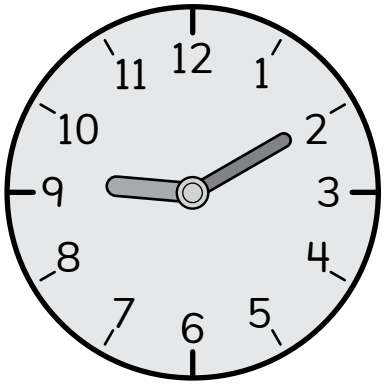
2. 75 + **25** = 100

3. What time does the clock show?

4:35



11:05



9:10

4. Arman and Vivi made sandwiches for a picnic. Vivi's sandwich was 95 cm long, and Arman's sandwich was 35 cm shorter than Vivi's. How long is Arman's sandwich? Model and solve with an equation.

Student models and equations will vary.

95	
35	60

95 – 35 = 60

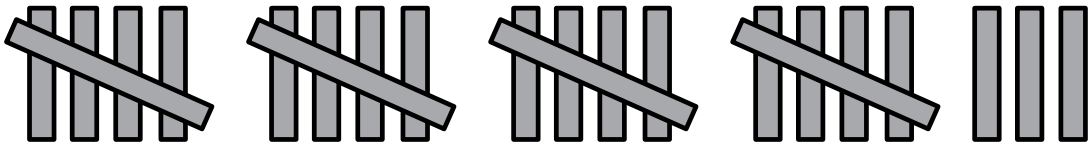
60 cm

Name: _____ Date: _____

Drawing Hands on an Analog Clock to Show Time to the Nearest Five Minutes

1. How many tally marks are below?

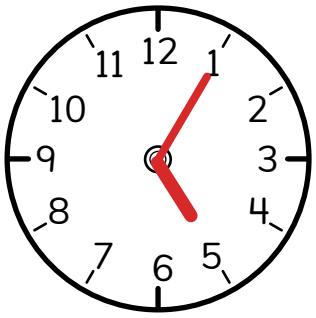
23



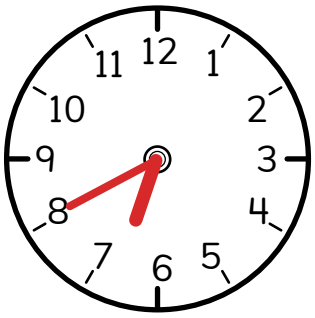
2. Model and solve. $643 - 288 =$ **355**

Student models will vary.

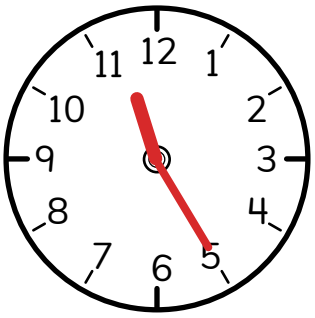
3. Draw the hour and minute hands on the clock to show the time.



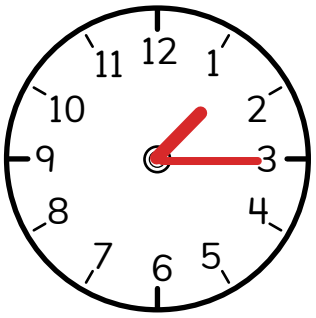
5:05



6:40



11:25



1:15

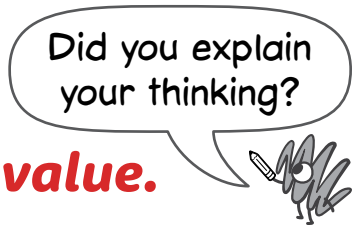
4. A treasure chest has a six numbers carved into it: 259, 295, 925, 529, 952, and 592. A piece of paper tied to the box says, "The number with the greatest value opens the chest."

Which number will unlock the treasure chest? Explain your thinking.

952

Possible explanation:

952 is the number with the greatest value.



Name: Date:

Telling and Writing Time to the Nearest Minute

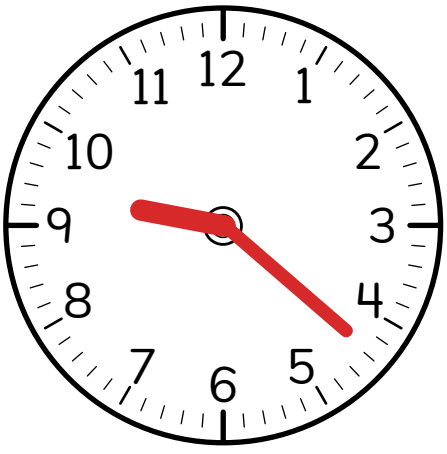
1. Write the number 1,148 in expanded form.

1,000 + 100 + 40 + 8

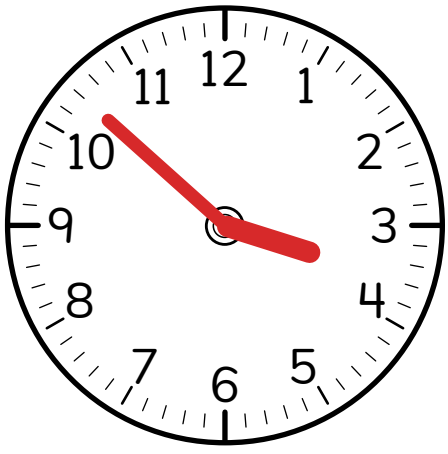
2. Model and solve. $304 - 288 =$ ***16***

Student models will vary.

3. Draw the hour and minute hands on the clock to show the time.



9:22



3:52

4. What time is shown on the clock? Explain your reasoning.

11:21. The hour hand is between the 11 and 12 and the minute hand is pointing to the eleventh tick mark on the clock.

Name: _____ Date: _____


Donner

Using a Timeline to Identify Times as A.M. or P.M.

1. Write the number 843 in expanded form.

800 + 40 + 3

2. Model and solve. 922 – 348 = **574**

Student models will vary.

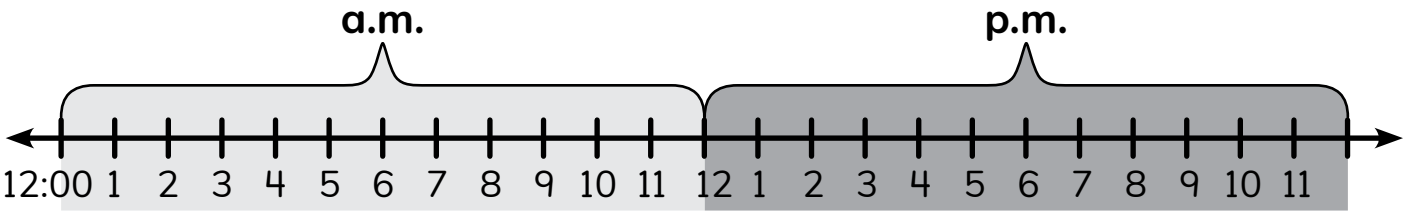
3. Circle a.m. or p.m. to tell what time of the day Donner does each activity.

Donner has art class

at 1:00 **a.m.** / **p.m.** (p.m. circled)

Donner eats breakfast

at 6:00 **a.m.** (circled) / **p.m.**



4. We counted 44 ants by the ant hill at the park. Some ants went inside the ant hill. Now we see 27 ants. How many ants went inside the ant hill? Model and solve with an equation.

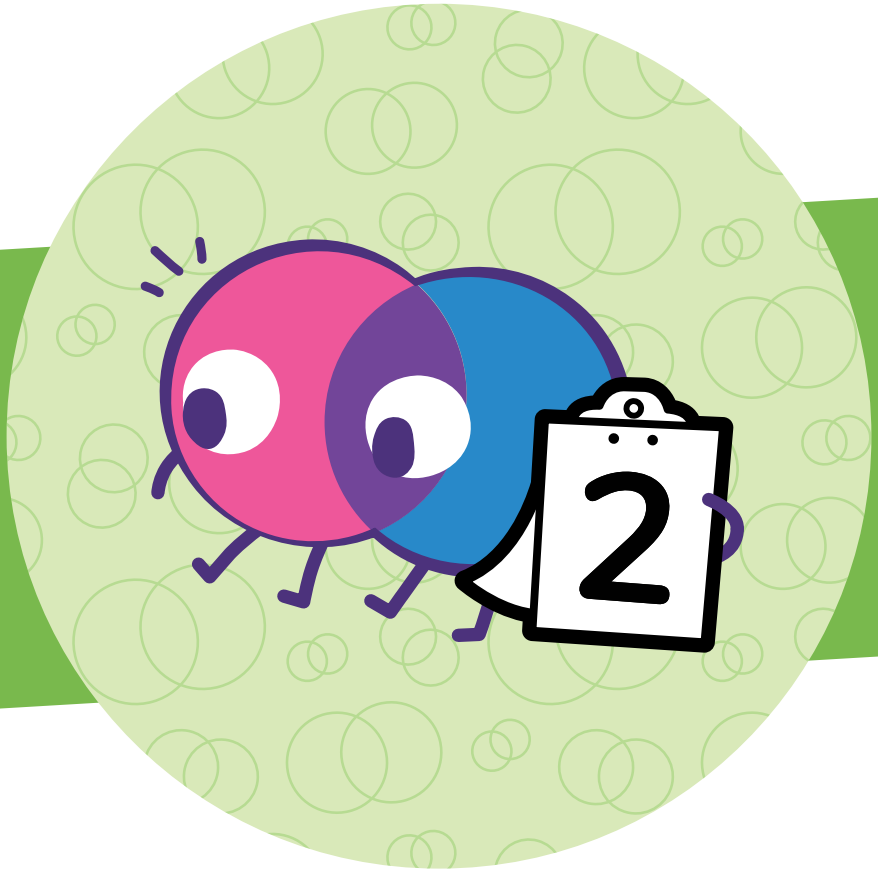
44	
27	17

Student models and equations will vary.

44 – 27 = 17

17 ants

ST Math
Texas



MIND EDUCATION