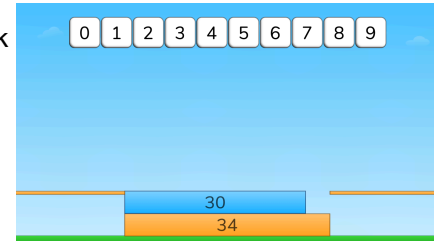
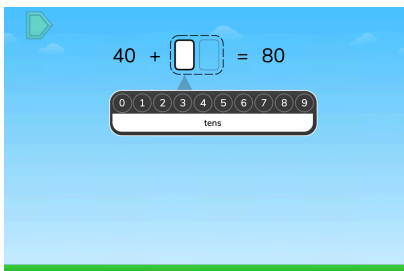


**Materials**

White board and markers

- Give students whiteboards and dry erase markers. Display the first puzzle in Level 1. Ask students, “What do you see? What do you think we need to do to solve this puzzle?” Have students turn and talk to a neighbor and share their thinking. Have students solve the puzzle, using their whiteboards if needed.
- Try one of the proposed solutions. Ask students, “Why do you think the answer is \_\_\_?” Discuss strategies as a class. Solve the puzzle and pause the puzzle before JiJi crosses the screen. Ask students, “How could we explain what is happening in this puzzle? What does JiJi have to start? (the amount in the blue bar) What does JiJi want to have? (the amount in the yellow bar) What does JiJi need? (the amount in the purple bar) Repeat with the remaining puzzles in Level 1.


**Directions**


- Display the first puzzle in Level 2. Say to students, “What is different about this puzzle and the last ones we did? How do you think we solve this puzzle? Turn and talk to a neighbor about what you think the answer is and why.”
- Share students’ solutions and talk about how they solved the problem. Tell students that the box represents the unknown in this problem. Say to students, “Often the unknown is the sum, like in the problem  $5 + 5$  or  $12 + 4$ . In this problem, we don’t know how many we have to start (or how many are added on), which makes solving the problem a little trickier.”

- Solve the puzzle and pause before JiJi crosses. Work together to write an equation to represent the puzzle using a variable. Explain to students that a variable represents the unknown in an equation. Tell students that a variable could be a letter or a shape.
- Solve the remaining puzzles in Level 2. Have students represent each puzzle with an equation that has a variable for the unknown.

**Sample Questions**

- What is the unknown in this problem?
- What are some different ways to represent an unknown?
- How did you solve this puzzle?
- In every puzzle, we added a friendly number (a multiple of 10). Why is it easier to add a friendly number?
- How does the model shown in Level 1 compare to a number line?

**What to look for**

How does the student:

- understand the relationship of addition and subtraction?
- solve a start-unknown equation?
- solve a change-unknown equation?
- explain the purpose of an unknown/variable?