

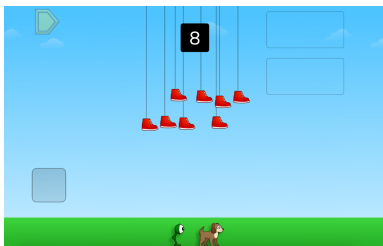
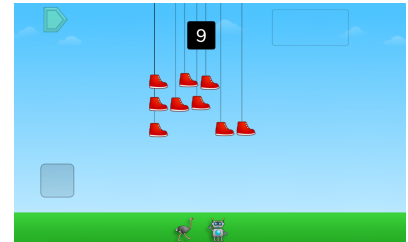


Materials

A set of Creature Cards  
How Many Legs Game Mat  
math tools  
dry erase markers

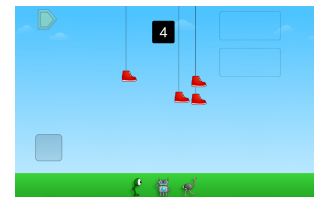
Directions

- Give students a set of Creature Cards, a How Many Legs Game Mat, math tools and dry erase markers.
- Display the first puzzle in Level 1. Ask students, “What do you notice? How do you think you solve this puzzle?” Have students turn and talk to a neighbor and share their thinking.
- Have students’ share their solutions. Try one of the solutions and watch the feedback. Ask students, “Can either creature be used to solve this puzzle? Why or why not? How did you determine which creature could be used?”
- Display the next puzzle in the Level 1 and ask students, “Which creature cannot be used to solve this puzzle? Why not?” Talk with students about skip counting. Prove that skip counting by the number of legs on the chosen creature will land on the number of shoes shown.
- Repeat with other puzzles in Level 1.



- Display the first puzzle in Level 2. Ask students, “What is different about this puzzle and the ones we just did? How many possible answers are there? Does this mean that each creature will work to solve this puzzle?”
- Have students use their game mat and other tools to prove that both creatures will work. Ask students to use their math tools to represent both creatures wearing the shoes (e.g. for 8 shoes: 8 groups of 1 for the eyeball and 2 groups of 4 for the dog).
- Model for students how to arrange the math tools into two different arrays. Explain to students that an *array* is an arrangement of objects in equal rows and columns. Ask students to read their array as addition of equal groups (e.g.  $1 + 1 + 1 + 1 + 1 + 1 + 1 + 1$  or  $4 + 4$ ). Prove that both arrays total 8, they are just organized in different ways.
- Repeat with the remaining puzzles in Level 2.

- Display the first puzzle in Level 3. Say to students, “Now there are two right answers but more than two creatures.” Have students use their tools to solve each puzzle. Share students’ strategies and solutions to each puzzle. Have students create and read an array for each correct solution.
- Repeat with the remaining puzzles in Level 3.



Sample Questions

- Why does this creature fill this number of shoes?
- Why can’t this creature fill this number of shoes?
- How is this array arranged?
- How can you prove your answer is correct?
- Is the number of shoes even or odd? How do you know?
- What strategy did you use to solve this puzzle?

What to look for

- How does the student:
- use the How Many Legs Game Mat and Creature Cards to represent and solve the problem?
  - create an array to model a puzzle?
  - discuss how the array models the puzzle?
  - write equations using repeated addition to represent the puzzles?
  - prove their answer is correct?