



Pie Monster

Grade 3

Solve Two-Step Problems

4 levels

Probing Questions

- What do the striped pies do?
- How do you decide how many you need?

Uncover the Thinking

Project puzzles from Level 4. Have students share how they determine whether to add or subtract pies. Ask students to write equations to match the puzzle. Be sure to indicate the unknown.

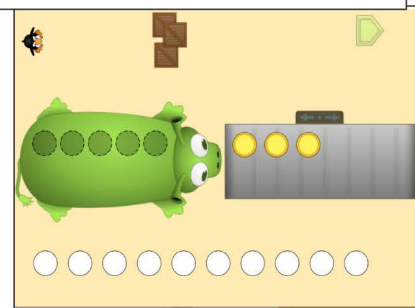
What Strategies Are Being Used?

Ask students to share how they are solving the puzzles. Compare and contrast different strategies. Help students connect the inverse operations to the different ways of solving the puzzles.

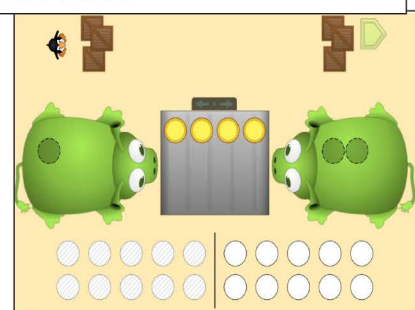
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Level 1 reviews how to play the Pie Monster game.



Level 4 requires students to choose whether to add or subtract.



Solve Two-Step Problems - 1



How Many Legs

Grade 3

Solve Two-Step Problems

3 levels

Probing Questions

- How do you know how many boots to choose?
- How can you figure it out without counting each leg?

What Concepts Are Being Developed?

Students must multiply before adding. This game provides a visual context to build an intuitive understanding of the order of operations which is further developed through subsequent games in the objective.

Classroom Connection

Project a puzzle and ask students to write an equation using addition and multiplication. Discuss why the puzzle makes it clear that you must multiply first. Ask them to connect each number in the equation with a visual in the puzzle.

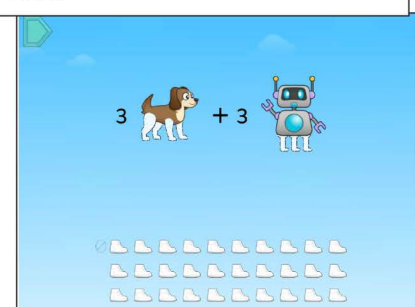
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Level 1 is all visual.



In levels 2-3, numbers replace some of the visuals.



Solve Two-Step Problems - 2



How Many Creatures

Grade 3

Solve Two-Step Problems

5 levels

Probing Questions

- How do you know how many of each animal to choose?
- Where do you start?
- What do you notice about the different animals?
- How many boots will you need for 1? For 2?

What's Important Here?

Since there are two unknowns in most levels, this game provides challenging problems that can't be easily solved by writing an equation and solving for an unknown. Students must manage multiple variables and try different strategies for solving the puzzles. Counting and adjusting the next attempt based on the previous try builds important problem-solving muscle.

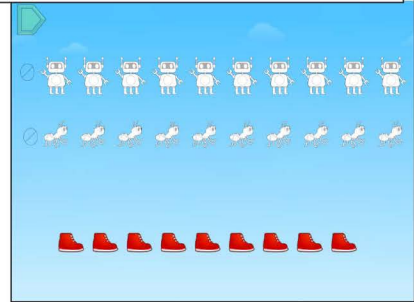
Classroom Connection

Choose a puzzle and have students work in pairs to determine if the puzzle has multiple solutions. Ask them to generate equations to show how they figured out their solutions. Look for patterns in multiple solutions.

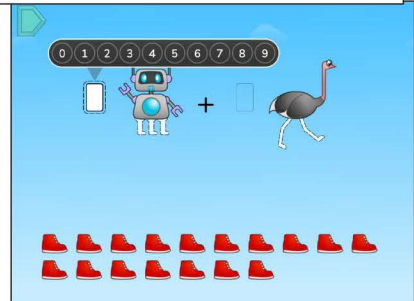
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There are multiple solutions for some of the puzzles.



Levels 4-5 introduce more symbolic language.



Solve Two-Step Problems - 3