Unit 7, Lesson 12

# Represent Problems on the Coordinate Grid

Let's represent problems on the coordinate grid.

Warm-up

## True or False: Addition and Multiplication

Decide if each statement is true or false. Be prepared to explain your reasoning.

- $(2 \times 10) + (3 \times 5) = (3 \times 10) + (1 \times 5)$

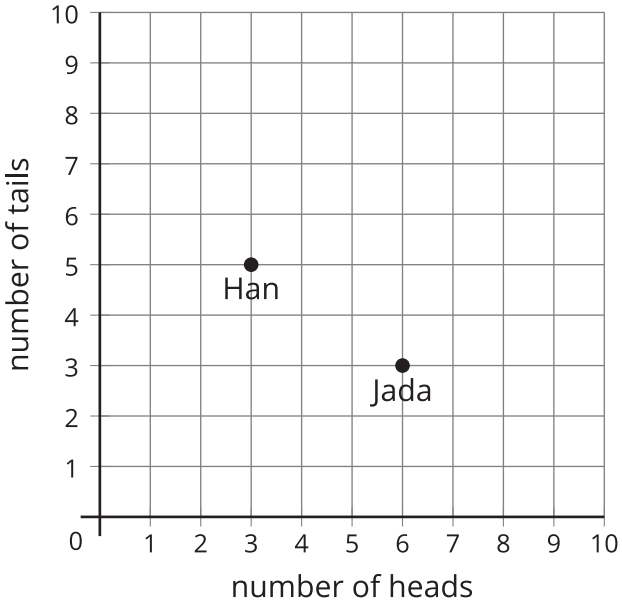
- $(3 \times 25) + (5 \times 5) = 8 \times 25$

- $(4 \times 25) + (10 \times 5) = (2 \times 25) + (10 \times 10)$

Activity 1

## Heads or Tails

Han and Jada each flip a penny several times. They each count how many times they get heads and how many times they get tails. Their results are plotted on the coordinate grid.




1. How many heads did Jada get? How many tails did Jada get? Explain how you know.

2. How many heads did Han get? How many tails did Han get? Explain how you know.

3. Flip a coin 10 times and record how many heads and tails you get. Plot the point that represents the results of your coin flips on the coordinate grid.

4. Show your partner the point you plotted on the coordinate grid. Look at the point your partner plotted. How many heads did your partner get? How many tails did your partner get? Explain or show your reasoning.

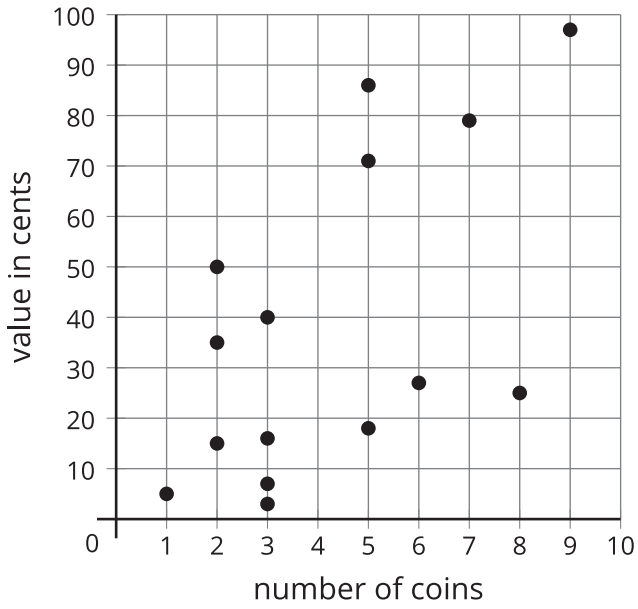
5. Do either of the points you or your partner plotted lie on the horizontal axis? What would a point on the horizontal axis mean in this situation?

6. If time allows, flip the coin 10 more times and record your results on the coordinate grid.

Activity 2

## Coin Values

The points plotted on the coordinate grid represent the number and value of coins some students had with them.




1. Tyler has 1 dime, 3 nickels, and 2 pennies. Which point represents Tyler's coins? Label the point.
2. Lin has 3 quarters, 1 dime, and 1 penny. Which point represents Lin's coins? Label the point.
3. Diego has 1 quarter and 1 dime. Write the coordinates of the plotted point that represents Diego's coins. Explain or show your reasoning.

4. Clare has 5 coins and does not have a quarter. Write the coordinates of the point that represents Clare's coins.
5. Which coins might Clare have? Explain or show your reasoning.