



# Equations with Unknowns

Let's represent addition and subtraction with number lines and with equations using a ? for the unknown.

## Warm-up

### True or False: Making Tens

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

- $40 = 10 + 27 + 3$

- $47 = 20 + 7 + 3 + 10$

- $60 = 3 + 47 + 10$



## Activity 1

### Number Line Riddles

Solve each riddle to find the mystery number.

For each riddle:

- Write an equation that represents the riddle. Write a ? for the unknown.
- Represent the equation on the number line. Write the mystery number.

1. I started at 15 and jumped 17 to the right. Where did I end?

Equation: \_\_\_\_\_

Mystery number: \_\_\_\_\_

2. I started at a number and jumped 20 to the left. I ended at 33.  
Where did I start?

Equation: \_\_\_\_\_

Mystery number: \_\_\_\_\_



3. I started at 42 and ended at 80. How far did I jump?

Equation: \_\_\_\_\_

Mystery number: \_\_\_\_\_

4. I started at 76 and jumped 27 to the left. Where did I end?

Equation: \_\_\_\_\_

Mystery number: \_\_\_\_\_

5. I started at a number and jumped 19 to the right. I ended at 67. Where did I start?

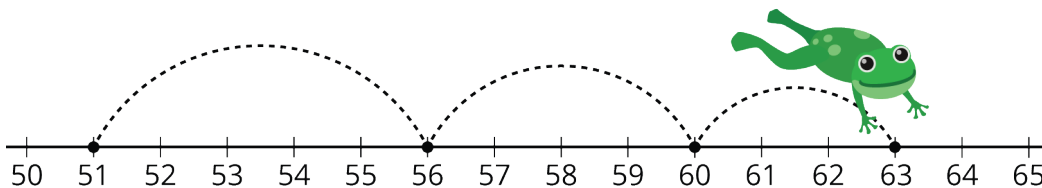
Equation: \_\_\_\_\_

Mystery number: \_\_\_\_\_

6. I started at 92 and ended at 33. How far did I jump?

Equation: \_\_\_\_\_

Mystery number: \_\_\_\_\_



## Activity 2

### Make the Equations True

Find the number that makes each equation true.

Show your thinking using a number line.

1.  $? - 48 = 19$

2.  $86 - ? = 39$

3.  $? + 57 = 72$

4.  $73 + ? = 91$