## Lesson 12: Equations with Unknowns

- Let's represent equations with 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.

- $40=10+27+3$
- $47=20+7+3+10$
- $60=3+47+10$


## 12.1: Number Line Riddles

Solve riddles to find the mystery number.

For each riddle:

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

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

Equation: $\qquad$

Mystery number: $\qquad$
2. I started at a number and jumped 20 to the left. I ended at 33. Where did I start?

Equation: $\qquad$

Mystery number: $\qquad$
3. I started on 42 and ended at 80 . How far did I jump?

Equation: $\qquad$

Mystery number: $\qquad$
4. I started at 76 and jumped 27 to the left. Where did I end?

Equation: $\qquad$

Mystery number: $\qquad$
5. I started at a number and jumped 19 to the right. I ended at 67 . Where did I start?

Equation: $\qquad$

Mystery number: $\qquad$
6. I started at 92 and ended at 33 . How far did I jump?

Equation: $\qquad$

Mystery number: $\qquad$


## 12.2: Make the Equations True

Find the number that makes each equation true.

Show your thinking on the number line.

1. $?-48=19$
2. $86-?=39$
3. $?+57=72$
$4.73+?=91$
