

WARM UP: Pick a Number Magic

What number am I thinking of?

- 1) I start with a number. I double it, then subtract 5. I get 7. What was my number?
- 2) I start with a number. I multiply it by 5, then add 1. I get 11. What was my number?
- 3) I start with a number. I triple it, then subtract 4. I get -1. What was my number?
- 4) I start with a number. I multiply by -2, then subtract 5. I get -15. What was my number?

WARM UP #2: Pick a Number Magic

Write an equation to show each situation. Solve each equation. Do you get the same answer as before?

1) I start with a number. I double it, then subtract 5. I get 7. What was my number?

$$2x - 5 = 7$$

2) I start with a number. I multiply it by 5, then add 1. I get 11. What was my number?

$$5x + 1 = 11$$

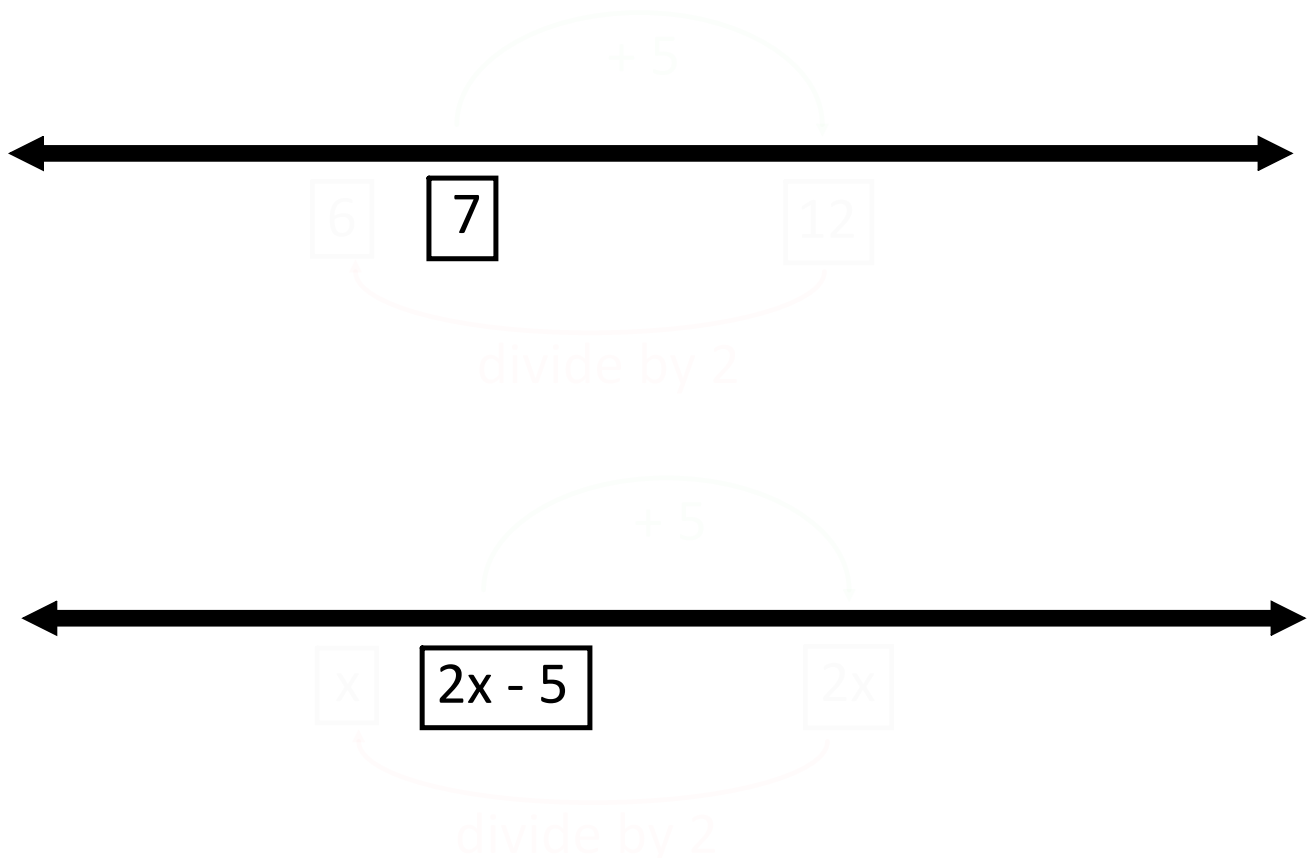
3) I start with a number. I triple it, then subtract 4. I get -1. What was my number?

4) I start with a number. I multiply by -2, then subtract 5. I get -15. What was my number?

Strategies: The Double Number Line

1. I start with a number. I double it, then subtract 5. I get 7. What was my number?

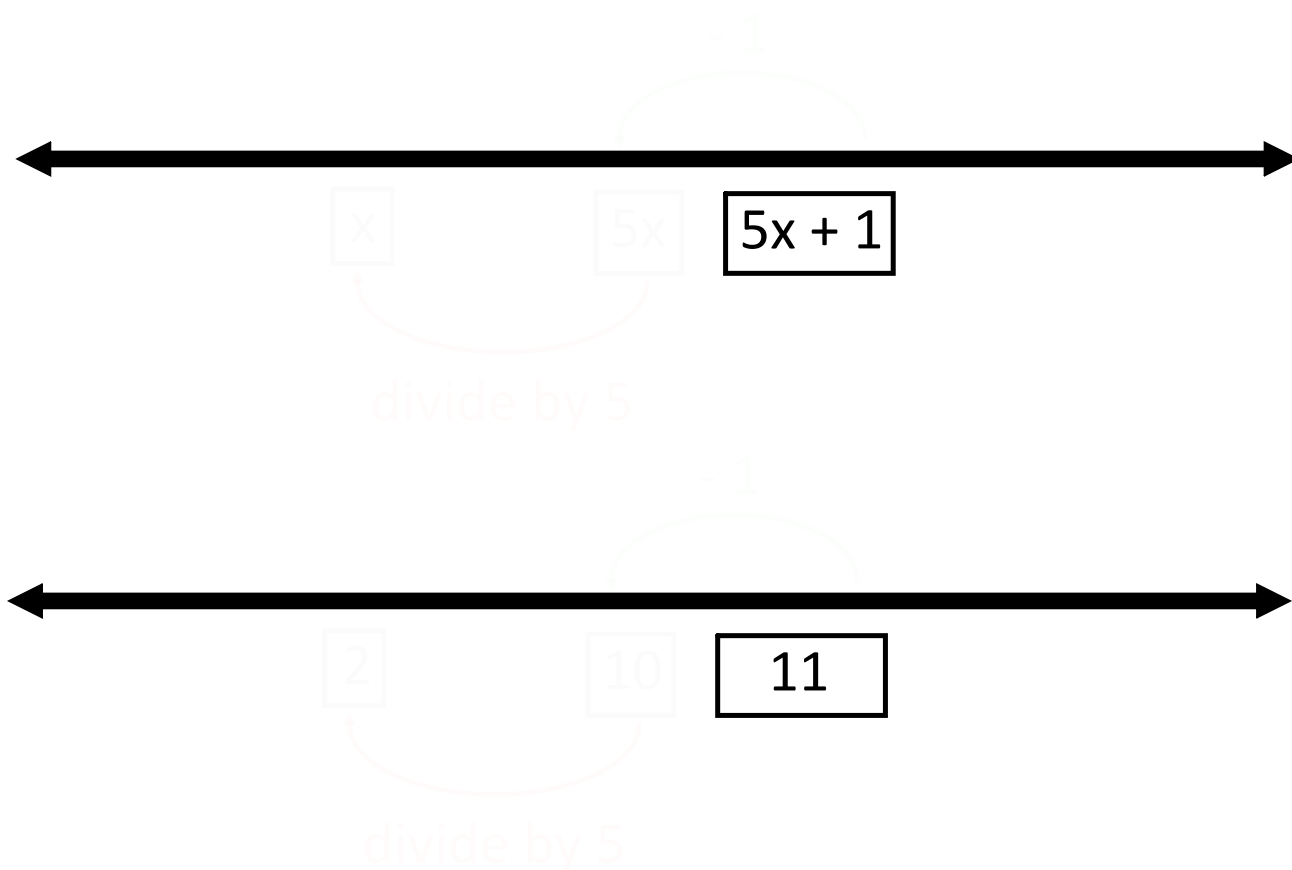
Equation: $2x - 5 = 7$ Our Goal: What is x ?



Strategies: The Double Number Line

2. I start with a number. I multiply it by 5, then add 1
I get 11. What was my number?

Equation: $5x + 1 = 11$ Our Goal: What is x ?



Practice: Writing Expressions

Write an algebraic expression to represent each sentence:

1. Triple a number.
2. Subtract 10 from a number.
3. Subtract a number from 10.
4. Add a number to itself.
5. Add 1 to a number and then double it.
6. Subtract a number from 10, then divide by 4.
7. Triple a number, add 2, and then add 1 more.