



Solving $px = q$

Undo the multiplication

- Today: solve equations where x is multiplied by a number.

$$3x = 18$$

- Yesterday you subtracted. Does that work here?

Turn & talk: subtract 3, or divide by 3?

Match the inverse to the operation

- $x + 7 = 12 \rightarrow$ the 7 is ADDED $\rightarrow$ subtract
- $3x = 18 \rightarrow$ the 3 is MULTIPLYING $\rightarrow$ divide

Ask what the number is DOING to x.

$3x = 18 \rightarrow x = 6$

- $18 \div 3 = 6$
- Check: $3(6) = 18$ ✓
- Subtracting 3 gives 15 — and $3(15) = 45$, so the check rejects it.

Divide the TOTAL by the coefficient

- $4x = 52 \rightarrow 52 \div 4 = 13 \checkmark$
- Not $4 \div 52$ — that is upside down.

Total first, then the number multiplying x.

Your turn

- Solve $7x = 56$, then check it.
- Thumbs up when you have both.

Answers need not be whole

- $10x = 45 \rightarrow x = 4.5$
- Check: $10(4.5) = 45$ ✓

Don't round to force a 'nicer' answer.

Now you

- → In-class practice sheet