Unit 9 · Length Problems and the Number Line Cheat Sheet

Unit 9 focus: length word problems

1 Big Idea

Add lengths that are joined. Subtract when a length is cut off or when you compare. Keep the same unit.

2 Important Vocabulary

same units	Lengths measured with the same unit so they can be added or subtracted.	12 cm + 9 cm = 21 cm
cut off	Take a length away.	a 50 cm ribbon with 18 cm cut off is 32 cm
distance	How far apart two points are.	from 20 to 35 is 15
unit	The length from one number to the next on a number line.	from 4 to 5 is 1 unit

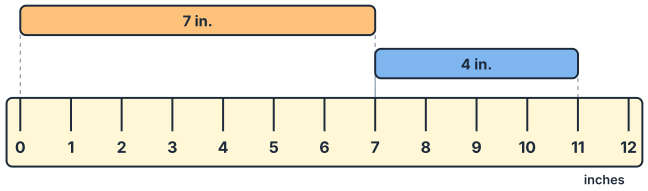
3 How It Works

A rope is 64 feet long. 27 feet are cut off. How long is it now?

Example: 64 − 27
Cut off means subtract: 64 − 27
Answer: 37

Answer: 37 feet

4 Visual Model



7 inches + 4 inches = 11 inches.

5 Remember This · Watch Out!

★ Remember this

- Write the unit with the answer.
- Draw a ruler or bar to see the lengths.

⚠ Watch out!

- **Mixed units:** change nothing; only add the same unit
- **Start unknown:** cut off 15, now 48: add to find the start

6 Try It!

1. 32 cm and 45 cm joined
   Answer: 77 centimeters
2. A 90 m path has 38 m done. How much is left?
   Answer: 52 meters

Answers are printed upside down. Turn the page to check!

Unit 9 · Length Problems and the Number Line Cheat Sheet

More practice: whole numbers, sums and differences on a number line

1 Big Idea

A number line is like a ruler. Numbers are lengths from 0. Adding jumps right and subtracting jumps left.

2 Important Vocabulary

number line	A line with equally spaced points for numbers, like a ruler.	0, 1, 2, 3 …
jump	A move along a number line.	a jump of +10 from 35 lands on 45
unit	The length from one number to the next on a number line.	from 4 to 5 is 1 unit
distance	How far apart two points are.	from 20 to 35 is 15

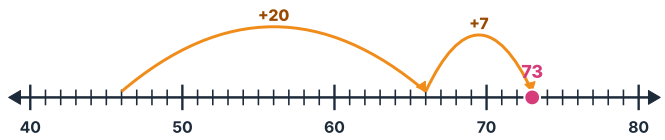
3 How It Works

Show 46 + 27 on a number line.

Example: 46 + 27
Jump +20: 46 → 66
Jump +7: 66 → 73

Answer: 73

4 Visual Model



46 + 20 = 66, 66 + 7 = 73.

5 ★ Remember This · Watch Out!

★ Remember this

- Count the spaces between ticks, not the ticks.
- Find how much each tick is worth first.

⚠ Watch out!

- **Wrong direction:** subtracting jumps to the left
- **Reading the jump size:** the answer is where you land

6 Try It!

1. Start at 70, jump back 25
   Answer: 45
2. From 38 to 61: how far?
   Answer: 23

Answers are printed upside down. Turn the page to check!