

Grade 3 · Perimeter · Worksheet Answer Key

Common Core 3.MD.D.8 · mathovore.fr

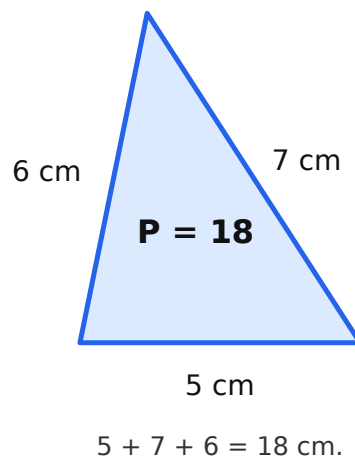
Full worked solutions for all 23 perimeter problems. Every answer shows the sum of the sides or the subtraction used for an unknown side, so students can see where a mistake happened.

Grade 3 Common Core: 3.MD.D.8

Problem 1: Perimeter of a triangle

Add the three sides: $5 + 7 + 6 = 18$.

The perimeter is **18 cm**.



Problem 2: Perimeter of a rectangle

$9 + 4 + 9 + 4 = 26$.

The perimeter is **26 inches**.

Problem 3: Perimeter of a square

A square has 4 equal sides: $8 + 8 + 8 + 8 = 32$, or $4 \times 8 = 32$.

The perimeter is **32 feet**.

Problem 4: Perimeter of a trapezoid

$$5+5+8+4=22.$$

The perimeter is **22 feet**.

Problem 5: Perimeter of a pentagon

$$7+5+6+8+4=30.$$

The perimeter is **30 cm**.

Problem 6: Regular hexagon

There are 6 equal sides: $6 \times 4 = 24$.

The perimeter is **24 meters**.

Problem 7: Rectangle from numbers

$$12+7=19, \text{ and } 2 \times 19 = 38.$$

The perimeter is **38 feet**.

Problem 8: Equal sides

$$3 \times 10 = 30.$$

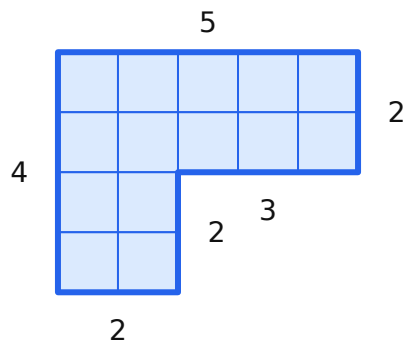
The perimeter is **30 inches**.

Problem 9: Count the units

Count the side lengths along the outside, starting at the top: 5, 2, 3, 2, 2, 4.

$$5+2+3+2+2+4=18.$$

The perimeter is **18 cm**.



The sides add to 18 cm.

Problem 10: Missing side of a triangle

Known sides: $8+9=17$. Subtract: $24-17=7$.

Check: $8+9+7=24$.

The missing side is **7 meters**.

Problem 11: Missing width

Two lengths: $9+9=18$. The two widths share $30-18=12$, so one width is $12\div 2=6$.

Check: $9+6+9+6=30$.

The width is **6 feet**.

Problem 12: Side of a square

Think: $4\times?=36$. Since $4\times 9=36$, each side is 9 inches.

Each side is **9 inches**.

Problem 13: Missing side of a quadrilateral

$11+9+12=32$. $40-32=8$.

The fourth side is **8 cm**.

Problem 14: Missing length

Two widths: $8+8=16$. $44-16=28$. Half of 28 is 14.

Check: $14+8+14+8=44$.

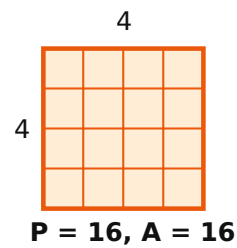
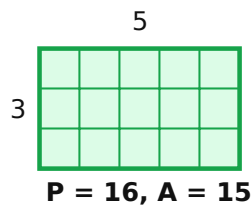
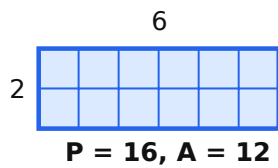
The length is **14 feet**.

Problem 15: Same perimeter

Perimeters: $6+2+6+2=16$, $5+3+5+3=16$, $4+4+4+4=16$.

Areas: $6\times 2=12$, $5\times 3=15$, $4\times 4=16$.

All three have a perimeter of 16 units. The areas are 12, 15 and 16 square units.



Same perimeter, different areas.

Problem 16: Compare two rectangles

A: $8+2+8+2=20$. B: $6+4+6+4=20$. The perimeters match.

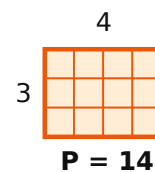
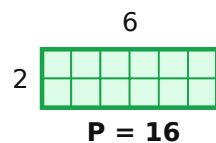
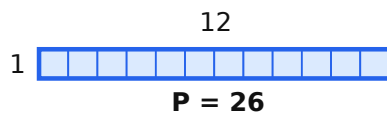
Areas: $8 \times 2 = 16$ and $6 \times 4 = 24$.

Both perimeters are 20 cm. Rectangle B has the greater area (24 square cm compared with 16 square cm).

Problem 17: Same area, different perimeters

$12+1+12+1=26$, $6+2+6+2=16$, $4+3+4+3=14$.

The perimeters are 26, 16 and 14 units. The shape closest to a square has the shortest distance around.



Same area, different perimeters.

Problem 18: Fence for a yard

$15+10+15+10=50$.

He needs **50 feet** of fence.

Problem 19: Walk around the park

$120+150+90=360$.

She walks **360 yards**.

Problem 20: Ribbon for a frame

Perimeter: $11+9+11+9=40$ inches.

She has 36 inches, and $40-36=4$.

No, she needs 4 more inches of ribbon.

Problem 21: Square pen

Four equal sides: $48\div 4=12$.

Each side is **12 feet**. Check: $4\times 12=48$.

Problem 22: Find the mistake

Liam added only one length and one width: $8+5=13$. Perimeter is the distance around all four sides.

$$8+5+8+5=26.$$

The correct perimeter is **26 inches**.

Problem 23: Banner at the market

Two widths: $7+7=14$. $34-14=20$, and half of 20 is 10, so the length is 10 feet.

Going around twice: $2\times 34=68$.

The length is 10 feet, and 68 feet of rope go around it twice.