

Geometry Puzzles

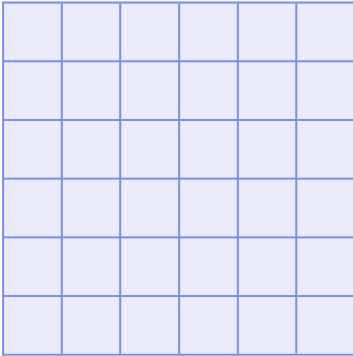
Advanced — ANSWER KEY

Cutting and joining shapes.

Think: After a cut or a join, re-trace the outside edge slowly — count every side once.

1. Answers with the thinking.

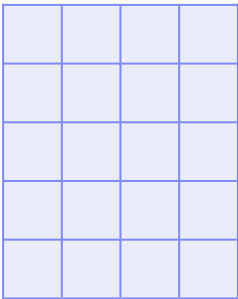
- 1) A 4×6 rectangle and a 2×6 rectangle are joined along their full 6-cm edges to make this shape. What is its PERIMETER, in cm?



Answer: 24

↳ it forms a 6×6 rectangle: $2 \times (6 + 6)$

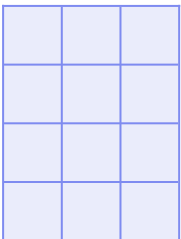
- 3) This 5×4 rectangle is cut into two equal pieces by one straight vertical cut. What is the PERIMETER of ONE piece, in cm?



Answer: 14

↳ each piece is 5×2 : $2 \times (5 + 2)$

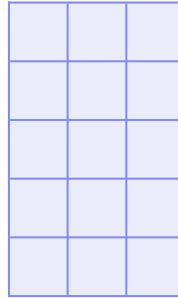
- 5) A 2×3 rectangle and a 2×3 rectangle are joined along their full 3-cm edges to make this shape. What is its PERIMETER, in cm?



Answer: 14

↳ it forms a 4×3 rectangle: $2 \times (4 + 3)$

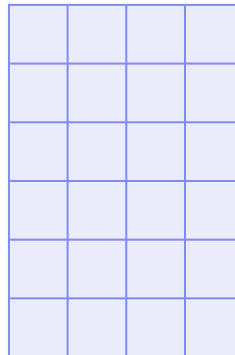
- 2) A 2×3 rectangle and a 3×3 rectangle are joined along their full 3-cm edges to make this shape. What is its PERIMETER, in cm?



Answer: 16

↳ it forms a 5×3 rectangle: $2 \times (5 + 3)$

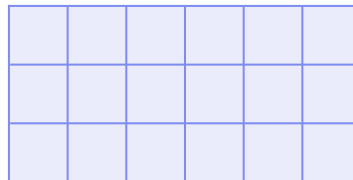
- 4) A 2×4 rectangle and a 4×4 rectangle are joined along their full 4-cm edges to make this shape. What is its PERIMETER, in cm?



Answer: 20

↳ it forms a 6×4 rectangle: $2 \times (6 + 4)$

- 6) This 3×6 rectangle is cut into two equal pieces by one straight vertical cut. What is the PERIMETER of ONE piece, in cm?



Answer: 12

↳ each piece is 3×3 : $2 \times (3 + 3)$