

Draw rectangles with equal area, unequal perimeter

NAME	DATE	SCORE / 10
------	------	------------

1

A rectangle has an area of 16 square metres. One side is 2 metres long. What is the perimeter, in metres, of the rectangle?

2

Emma draws two different rectangles, and each one has an area of 12 square cm. Which two rectangles could Emma have drawn?

☐ 1 cm by 5 cm and 2 cm by 4 cm

☐ 1 cm by 12 cm and 2 cm by 6 cm

☐ 3 cm by 4 cm and 4 cm by 12 cm

☐ 1 cm by 11 cm and 2 cm by 10 cm

3

Each square on the grid below is 1 unit long. Draw two different rectangles that each have an area of 36 square units. Write the perimeter of each rectangle inside it.

- 4** A rectangle has whole-number sides and an area of 36 square units. Write a perimeter, in units, that the rectangle could have, from 18 to 56.



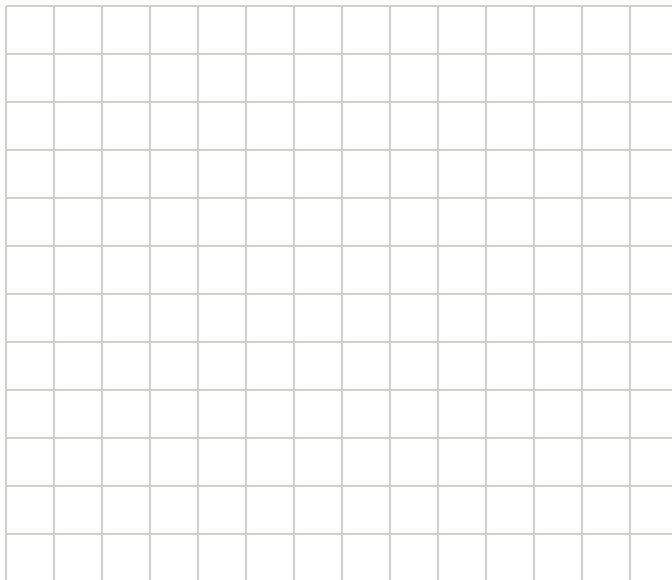
- 5** A rectangle has an area of 18 square centimetres. One side is 9 centimetres long. What is the perimeter, in centimetres, of the rectangle?



- 6** Emma draws two different rectangles, and each one has an area of 18 square cm. Which two rectangles could Emma have drawn?

- ☐ 5 cm by 13 cm and 8 cm by 10 cm
 ☐ 3 cm by 6 cm and 1 cm by 18 cm
☐ 1 cm by 8 cm and 2 cm by 7 cm
 ☐ 1 cm by 18 cm and 7 cm by 12 cm

- 7** Each square on the grid below is 1 unit long. Draw two different rectangles that each have an area of 24 square units. Write the perimeter of each rectangle inside it.



- 8** A rectangle has an area of 14 square metres. One side is 7 metres long. What is the perimeter, in metres, of the rectangle?



- 9** A rectangle has an area of 48 square centimetres. One side is 8 centimetres long. What is the perimeter, in centimetres, of the rectangle?



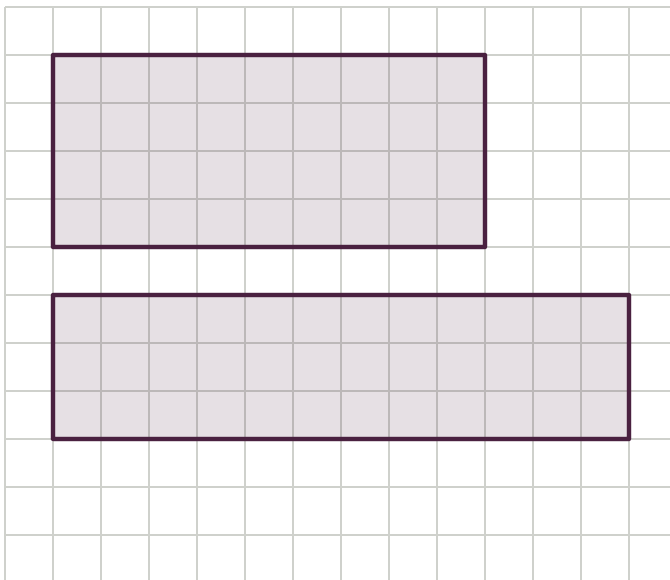
- 10** A rectangle has an area of 63 square centimetres. One side is 7 centimetres long. What is the perimeter, in centimetres, of the rectangle?



Draw rectangles with equal area, unequal perimeter

1	20	2	1 cm by 12 cm and 2 cm by 6 cm
4	24	5	22
	Any one of these is right too: 26, 30, 40.		
6	3 cm by 6 cm and 1 cm by 18 cm	8	18
9	28	10	32

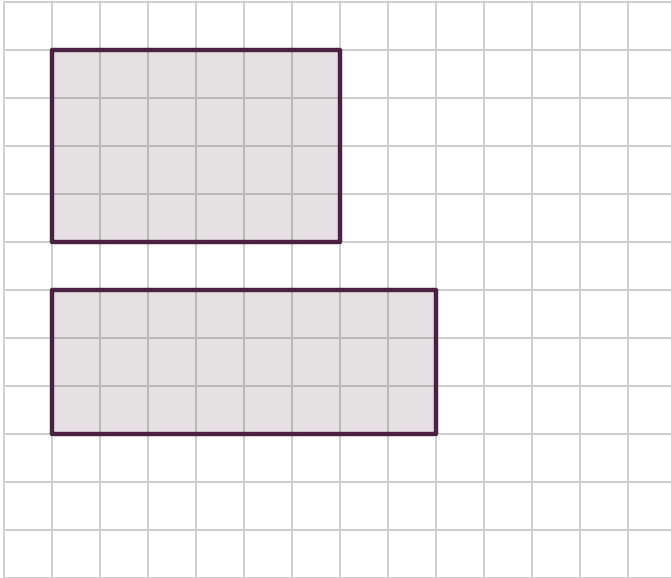
3 A drawing



What counts as right: Two different rectangles drawn along the grid lines, each covering exactly 36 squares, so the two side lengths of each multiply to 36. On this grid they can be any two of 3 by 12 (perimeter 30 units), 4 by 9 (perimeter 26 units) and 6 by 6 (perimeter 24 units), each with its own perimeter written inside it (the square counts). 1 by 36 and 2 by 18 also have an area of 36 but do not fit on the grid. A rectangle with a different area does not count, and neither does the same rectangle drawn twice, even turned.

7

A drawing



What counts as right: Two different rectangles drawn along the grid lines, each covering exactly 24 squares, so the two side lengths of each multiply to 24. On this grid they can be any two of 2 by 12 (perimeter 28 units), 3 by 8 (perimeter 22 units) and 4 by 6 (perimeter 20 units), each with its own perimeter written inside it. 1 by 24 also has an area of 24 but does not fit on the grid. A rectangle with a different area does not count, and neither does the same rectangle drawn twice, even turned.