

11+ Maths Practice Paper

Year 4 · Foundation

Lesson 6.3: Perimeter and area of 2D polygons

Read this with your child:

1. This paper has **20 questions** in two parts. Work through them in order. The questions get harder as you go.
2. **Part 1** is multiple choice. Choose **one** answer, A, B, C, D or E, and mark it on the separate answer sheet by drawing a firm line through the box next to its letter. If you change your mind, rub the line out completely and mark your new answer.
3. **Part 2** asks you to write your answer. Write it in the boxes on the answer sheet, **one digit in each box**, starting from the left.
4. If a question is hard, leave it and come back to it at the end.
5. You may use rough paper for working out. You may **not** use a calculator.
6. Suggested time: **25 minutes**.

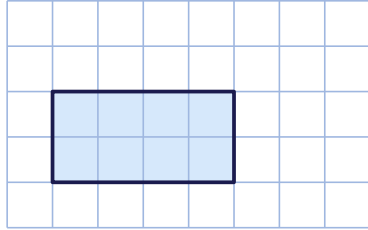
The answer sheet is after the questions. The answers, with a short explanation of each, are at the back for a parent to mark with.

These are original practice questions written by Elite Learners in the style of 11+ entrance tests. They are not produced by, or connected with, GL Assessment or Cambridge University Press & Assessment (CEM).

Example

Each square is 1 cm^2 .

What is the area of the shaded rectangle?



A 8 cm^2

B 12 cm^2

C 6 cm^2

D 4 cm^2

E 10 cm^2

Answer: A Count the squares: 2 rows of 4 is 8 squares, so the area is 8 cm^2 .

The answer, A, has already been marked on your answer sheet.

Now turn over and start Part 1.

Part 1: Multiple choice

1

Which word means the distance all the way round the edge of a shape?

- A** area **B** perimeter **C** volume **D** capacity **E** mass

2

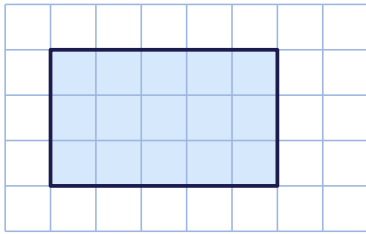
Which of these units could measure an area?

- A** cm **B** kg **C** cm^2 **D** ml **E** m

3

Each square is 1 cm^2 .

What is the area of the shaded rectangle?

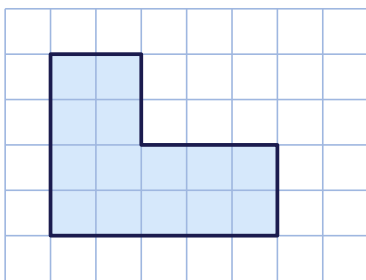


- A** 16 cm^2 **B** 15 cm^2 **C** 8 cm^2 **D** 12 cm^2 **E** 18 cm^2

4

Each square is 1 cm^2 .

What is the area of the shaded shape?

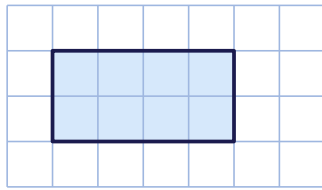


- A** 18 cm^2 **B** 16 cm^2 **C** 12 cm^2 **D** 14 cm^2 **E** 10 cm^2

5

Each square is 1 cm long.

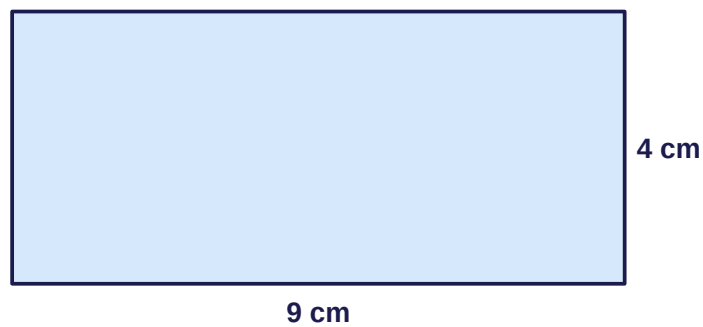
What is the perimeter of the shaded rectangle?



- A 8 cm B 6 cm C 10 cm D 14 cm E 12 cm

6

What is the perimeter of this rectangle?

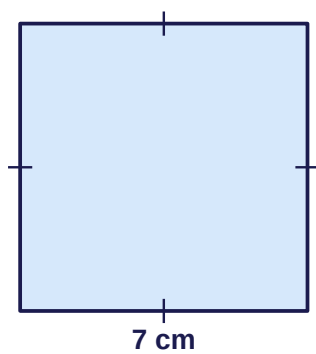


- A 13 cm B 36 cm C 22 cm D 30 cm E 26 cm

7

The marks on the sides show that this square has four sides the same length.

What is its perimeter?

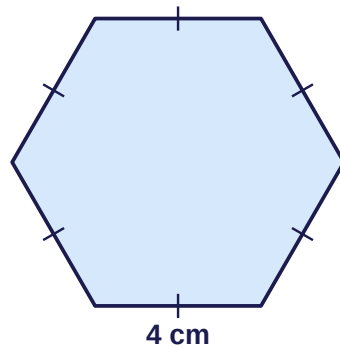


- A 14 cm B 49 cm C 28 cm D 21 cm E 35 cm

8

This is a regular hexagon: all six sides are the same length.

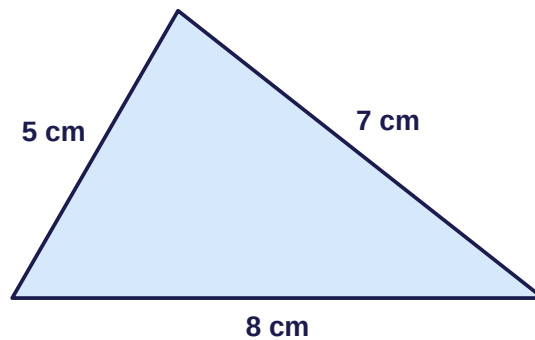
What is its perimeter?



- A** 24 cm **B** 16 cm **C** 20 cm **D** 28 cm **E** 10 cm

9

What is the perimeter of this triangle?

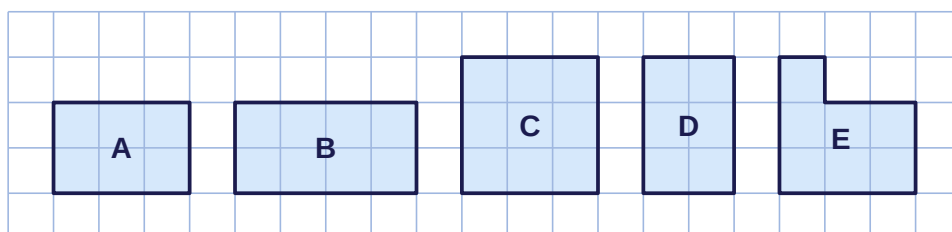


- A** 20 cm **B** 15 cm **C** 13 cm **D** 21 cm **E** 12 cm

10

Each square is 1 cm^2 .

Which shape has the biggest area?



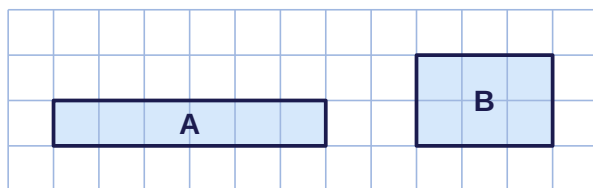
- A** Shape A **B** Shape B **C** Shape C **D** Shape D **E** Shape E

11

Each square is 1 cm long.

Shape A and Shape B both have an area of 6 cm^2 .

Which of these is true?



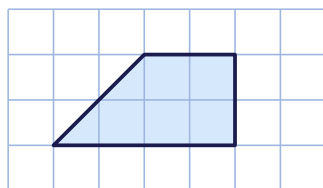
- A** Shape B has the longer perimeter
- B** They have the same perimeter
- C** Shape A has the bigger area
- D** Shape A has the longer perimeter
- E** Shape B has the bigger area

12

Each square is 1 cm^2 .

The sloping side cuts two squares exactly in half.

What is the area of the shaded shape?



- A** 6 cm^2
- B** 8 cm^2
- C** 5 cm^2
- D** 7 cm^2
- E** 10 cm^2

13

A garden is a rectangle 10 m long and 6 m wide. Ted walks all the way round the edge.

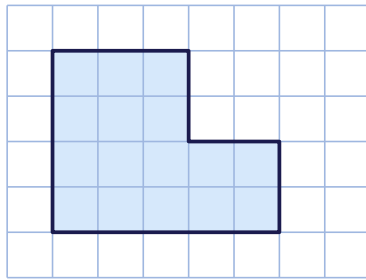
How far does he walk?

- A** 16 m
- B** 60 m
- C** 26 m
- D** 22 m
- E** 32 m

14

Each square is 1 cm long.

What is the perimeter of the shaded shape?



- A 16 cm B 18 cm C 14 cm D 20 cm E 9 cm

15

A square has a perimeter of 20 cm.

How long is each side?

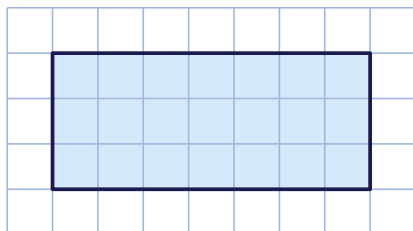
- A 10 cm B 4 cm C 80 cm D 5 cm E 16 cm

Part 2: Write your answer

16

Each square is 1 cm long.

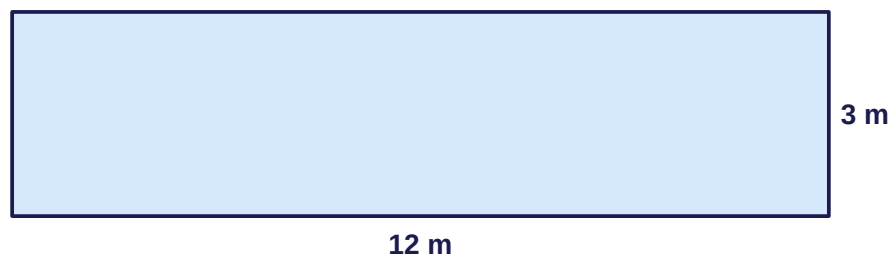
What is the perimeter of the shaded rectangle, in cm?



Write your answer in the boxes on the answer sheet, one digit in each box.

17

What is the perimeter of this rectangle, in metres?

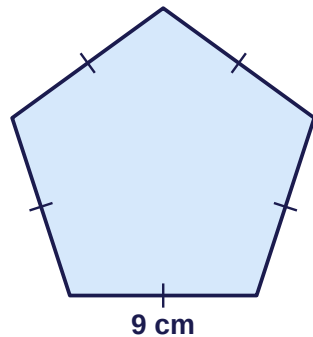


Write your answer in the boxes on the answer sheet, one digit in each box.

18

This is a regular pentagon: all five sides are the same length.

What is its perimeter, in cm?

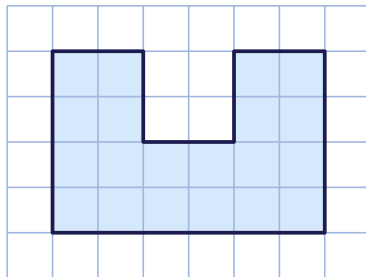


Write your answer in the boxes on the answer sheet, one digit in each box.

19

Each square is 1 cm^2 .

What is the area of the shaded shape, in cm^2 ?



Write your answer in the boxes on the answer sheet, one digit in each box.

20

Two rectangles, each 6 cm long and 4 cm wide, are put end to end to make one long rectangle 12 cm long and 4 cm wide.

What is the perimeter of the long rectangle, in cm?

Write your answer in the boxes on the answer sheet, one digit in each box.

Answer sheet

11+ Maths Practice Paper · Year 4 · Lesson 6.3: Perimeter and area of 2D polygons

Name

Draw a firm line through the box next to your answer, like the example.

Part 1: Multiple choice

Ex	A ☒	B ☐	C ☐	D ☐	E ☐
1	A ☐	B ☐	C ☐	D ☐	E ☐
2	A ☐	B ☐	C ☐	D ☐	E ☐
3	A ☐	B ☐	C ☐	D ☐	E ☐
4	A ☐	B ☐	C ☐	D ☐	E ☐
5	A ☐	B ☐	C ☐	D ☐	E ☐
6	A ☐	B ☐	C ☐	D ☐	E ☐
7	A ☐	B ☐	C ☐	D ☐	E ☐
8	A ☐	B ☐	C ☐	D ☐	E ☐
9	A ☐	B ☐	C ☐	D ☐	E ☐
10	A ☐	B ☐	C ☐	D ☐	E ☐
11	A ☐	B ☐	C ☐	D ☐	E ☐
12	A ☐	B ☐	C ☐	D ☐	E ☐
13	A ☐	B ☐	C ☐	D ☐	E ☐
14	A ☐	B ☐	C ☐	D ☐	E ☐
15	A ☐	B ☐	C ☐	D ☐	E ☐

Part 2: Write your answer, one digit in each box

16		
17		
18		
19		
20		

Answers

For a parent to mark with. One mark for each question: the paper is out of 20. Talk through any your child got wrong, using the explanation.

Q	Answer	How to get it
1	B perimeter	The perimeter is the distance round the edge. The area is the space inside.
2	C cm^2	Areas are measured in squares, such as square centimetres (cm^2). Centimetres (cm) and metres (m) measure lengths.
3	B 15 cm^2	3 rows of 5 squares: $5 \times 3 = 15 \text{ cm}^2$. (16 cm is its perimeter.)
4	D 14 cm^2	Count the squares: 10 in the bottom part and 4 more on top: $10 + 4 = 14 \text{ cm}^2$. (18 cm is its perimeter.)
5	E 12 cm	Count the edges all the way round: $4 + 2 + 4 + 2 = 12 \text{ cm}$. (8 is the number of squares inside: the area.)
6	E 26 cm	The top is also 9 cm and the left side is also 4 cm: $9 + 4 + 9 + 4 = 26 \text{ cm}$.
7	C 28 cm	Four sides of 7 cm: $4 \times 7 = 28 \text{ cm}$.
8	A 24 cm	Six sides of 4 cm: $6 \times 4 = 24 \text{ cm}$.
9	A 20 cm	Add all three sides: $8 + 7 + 5 = 20 \text{ cm}$.
10	C Shape C	Count the squares: A has 6, B has 8, C has 9, D has 6 and E has 7. Shape C is the biggest, with 9 cm^2 .
11	D Shape A has the longer perimeter	Shape A: $6 + 1 + 6 + 1 = 14 \text{ cm}$. Shape B: $3 + 2 + 3 + 2 = 10 \text{ cm}$. The same area, but A has the longer perimeter.
12	A 6 cm^2	There are 5 whole squares and 2 half squares. Two halves make one whole: $5 + 1 = 6 \text{ cm}^2$.
13	E 32 m	All the way round is the perimeter: $10 + 6 + 10 + 6 = 32 \text{ m}$.
14	B 18 cm	Go round the edge and count: $5 + 2 + 2 + 2 + 3 + 4 = 18 \text{ cm}$. (16 is the number of squares inside.)
15	D 5 cm	A square has 4 equal sides: $20 \div 4 = 5 \text{ cm}$.
16	20	Count the edges all the way round: $7 + 3 + 7 + 3 = 20 \text{ cm}$.
17	30	$12 + 3 + 12 + 3 = 30 \text{ m}$.
18	45	Five sides of 9 cm: $5 \times 9 = 45 \text{ cm}$.
19	20	4 rows of 6 squares would be 24, but the gap at the top has $2 \times 2 = 4$ squares missing: $24 - 4 = 20 \text{ cm}^2$.
20	32	$12 + 4 + 12 + 4 = 32 \text{ cm}$.

Score: out of 20