4.7 Perimeter and Area of Rectangles and Triangles: 30-minute Pack

Calculators not allowed · about 30 minutes

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 A rectangular garden is 12 m by 8 m. A triangular flower bed with base 6 m and height 4 m is removed from one corner. Calculate the area of the garden that remains.

(2)

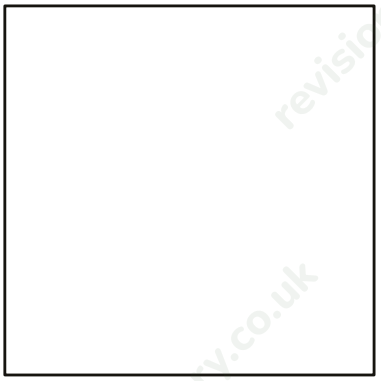
2 A floor is 11 m long and 9 m wide. Carpet costs £7 per square metre. Work out the total cost of carpeting the floor.

(3)

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3 A square has side length 6 cm. Calculate its perimeter.

Diagram NOT accurately drawn

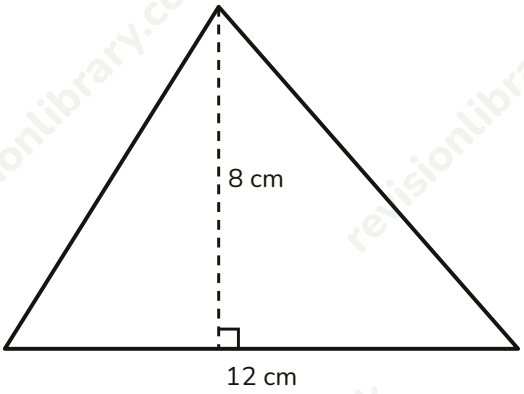


(1)

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4 A triangle has a base of 12 cm and a perpendicular height of 8 cm. Work out its area.

Diagram NOT accurately drawn



(2)

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5 A rectangle has length (2x + 5) cm and width (2x + 2) cm. The perimeter of the rectangle is 54 cm.
Work out the value of x and the area of the rectangle.

Diagram NOT accurately drawn



Perimeter = 54 cm

(4)

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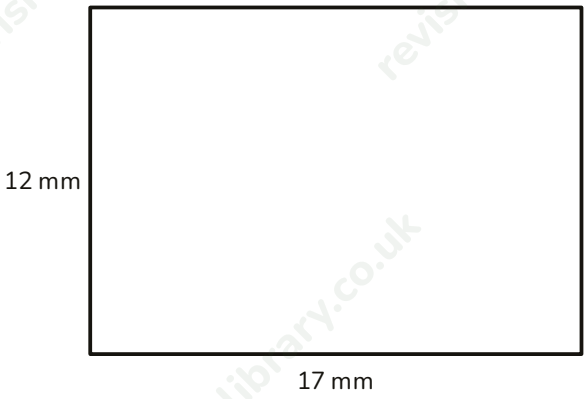
6 The area of a rectangle is 315 cm² and its length is 21 cm. Work out its width and its perimeter.

(3)

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7 A rectangle has length 17 mm and width 12 mm. Work out (a) its perimeter and (b) its area.

Diagram NOT accurately drawn



(2)

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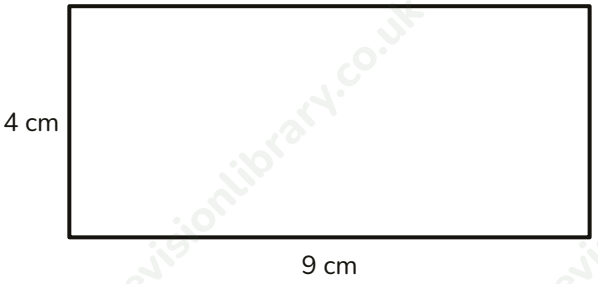
8 The perimeter of a triangle is 27 cm. Two sides are 8 cm and 9 cm. Find the length of the third side.

(1)

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9 A rectangle has length 9 cm and width 4 cm. Write down its perimeter.

Diagram NOT accurately drawn



(1)

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10 A triangular flag has a base 3 cm longer than its height. Its area is 44 cm². Given the height is h cm, form an equation in h, and hence find the height and base of the flag.

(3)

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11 The perimeter of a triangle is 32 cm. Two sides are 11 cm and 12 cm. Find the length of the third side.

(2)

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Mark scheme · 4.7 Perimeter and Area of Rectangles and Triangles: 30-minute Pack

Question 1

area of rectangle and area of triangle found: 12x8 and 1/2x6x4	M1
remaining area = 84 m² cao (96 - 12 = 84)	A1

Answer: **84 m^2**

Question 2

11 x 9 = 99	M1
99 x 7	M1
£693 cao	A1

Answer: **£693**

Question 3

24 cm cao	B1

Answer: **24 cm**

Question 4

1/2 x 12 x 8 or 12 x 8 ÷ 2	M1
48 cm² cao	A1

Answer: **48 cm^2**

Question 5

2((2x + 5) + (2x + 2)) = 54	M1
x = 5	A1
15 x 12	M1
180 cm² cao	A1

Answer: **x = 5, area = 180 cm^2**

Question 6

315 ÷ 21	M1
width = 15 cm	A1
perimeter = 72 cm	A1

Answer: **width = 15 cm, perimeter = 72 cm**

Question 7

(a) 58 mm	B1
(b) 204 mm²	B1

Answer: **(a) 58 mm, (b) 204 mm^2**

Question 8

10 cm cao	B1

Answer: **10 cm**

Question 9

26 cm cao	B1

Answer: **26 cm**

Question 10

forms h(h+3) = 88 (from (h)(h+3)/2 = 44)	M1
solves the equation to give h = 8	M1
height = 8 cm, base = 11 cm cao	A1

Answer: **Height 8 cm, base 11 cm**

Question 11

uses 32 - 11 - 12	M1
9 cm cao	A1

Answer: **9 cm**

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