4.8 Area of Parallelograms, Trapezia and Compound Shapes: 1-hour Pack

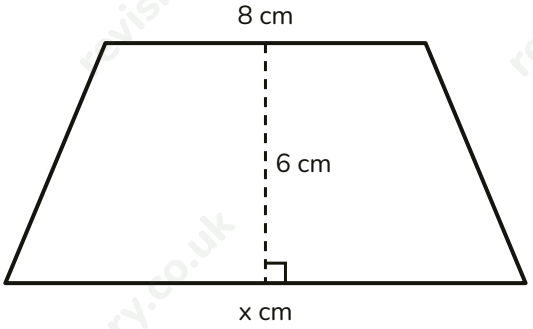
Calculators not allowed · about 60 minutes

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 A trapezium has area 63 cm². Its parallel sides are 8 cm and x cm, and the distance between them is 6 cm. Work out the value of x.

Diagram NOT accurately drawn



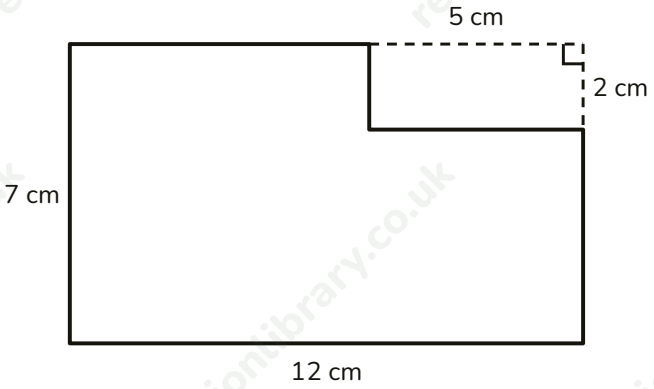
Area = 63 cm²

(4)

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2 An L-shape is made by taking a 12 cm by 7 cm rectangle and cutting a 5 cm by 2 cm rectangle out of one corner.
Work out the area of the L-shape.

Diagram NOT accurately drawn

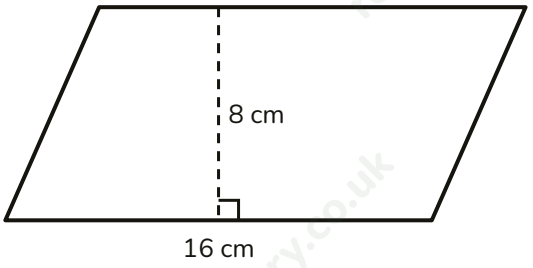


(3)

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3 A parallelogram has a base of 16 cm and a perpendicular height of 8 cm. Work out its area.

Diagram NOT accurately drawn

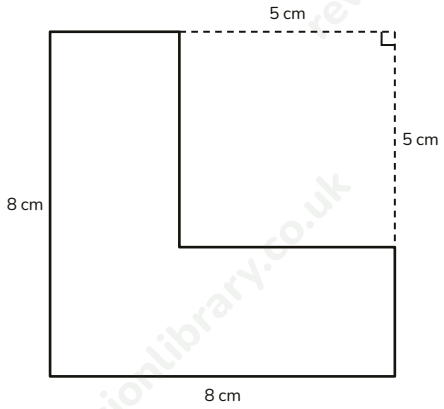


(2)

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4 An L-shape is made by taking a 8 cm by 8 cm rectangle and cutting a 5 cm by 5 cm rectangle out of one corner.
Work out the perimeter of the L-shape.

Diagram NOT accurately drawn

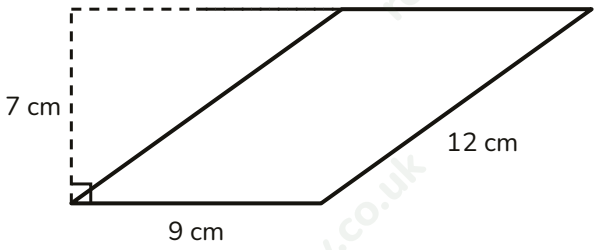


(3)

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5 A parallelogram has base 9 cm, a slanting side of 12 cm and a perpendicular height of 7 cm. Work out its area.

Diagram NOT accurately drawn

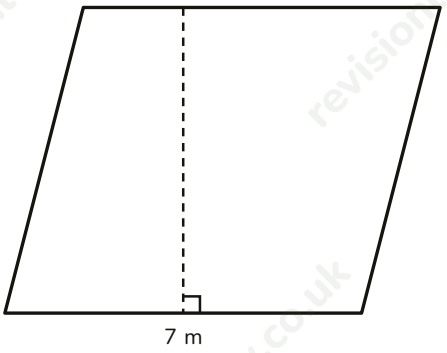


(2)

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6 A parallelogram has base 7 m and area 42 m². Work out the height.

Diagram NOT accurately drawn



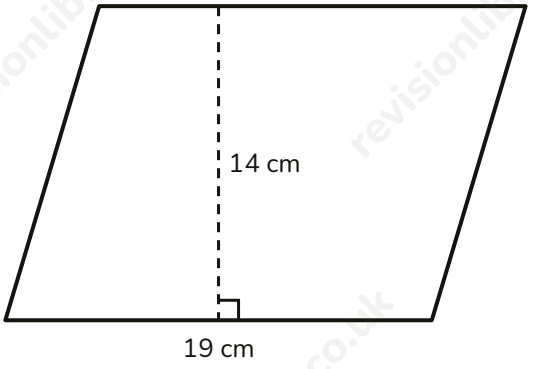
Area = 42 m²

(2)

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7 A parallelogram has a base of 19 cm and a perpendicular height of 14 cm. Work out its area.

Diagram NOT accurately drawn

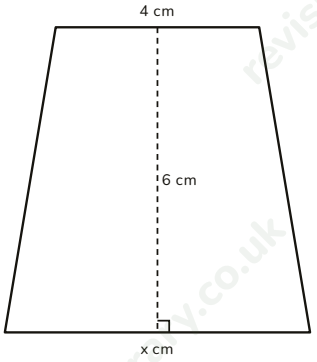


(2)

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8 A trapezium has area 30 cm². Its parallel sides are 4 cm and x cm, and the distance between them is 6 cm. Work out the value of x.

Diagram NOT accurately drawn



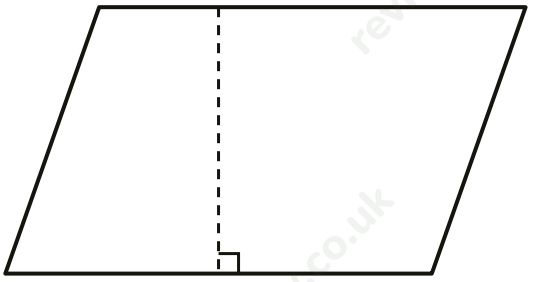
Area = 30 cm²

(4)

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9 A parallelogram has area 40 cm² and base 8 cm. Work out the perpendicular height.

Diagram NOT accurately drawn



8 cm

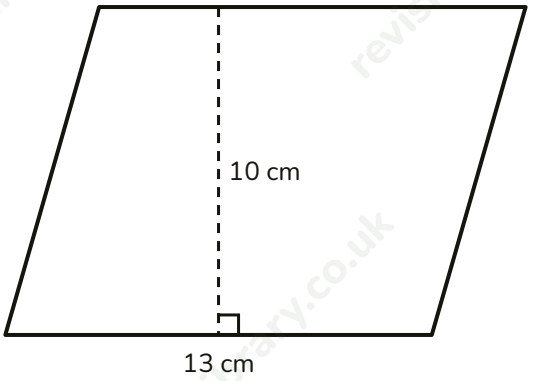
Area = 40 cm²

(2)

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10 A parallelogram has a base of 13 cm and a perpendicular height of 10 cm. Work out its area.

Diagram NOT accurately drawn

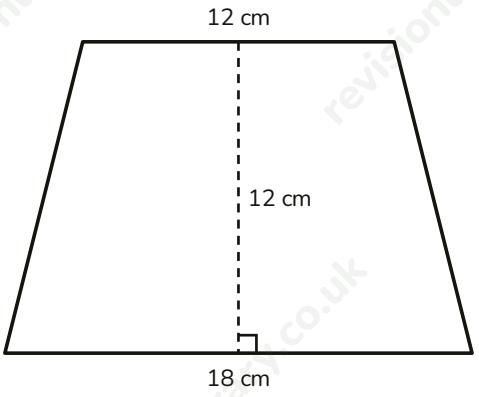


(2)

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11 A trapezium has parallel sides of 12 cm and 18 cm. The distance between the parallel sides is 12 cm. Work out the area of the trapezium.

Diagram NOT accurately drawn



(3)

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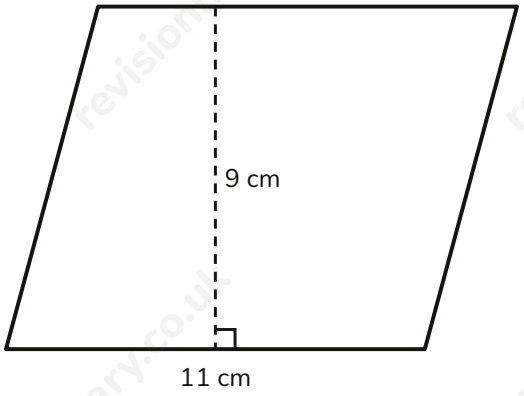
12 A floor is 6 m long and 6 m wide. It is covered with square tiles of side 50 cm. How many tiles are needed? (1 m² = 10 000 cm²)

(3)

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13 A parallelogram has a base of 11 cm and a perpendicular height of 9 cm. Work out its area.

Diagram NOT accurately drawn

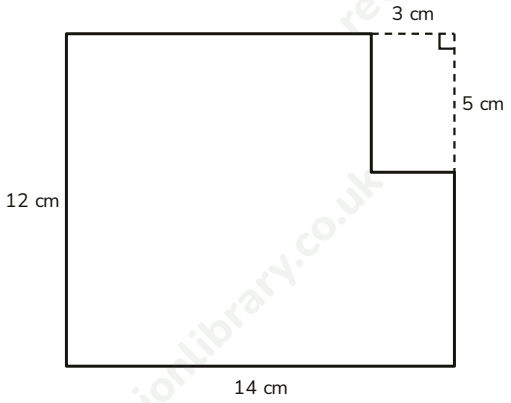


(2)

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14 An L-shape is made by taking a 14 cm by 12 cm rectangle and cutting a 3 cm by 5 cm rectangle out of one corner.
Work out the area of the L-shape.

Diagram NOT accurately drawn

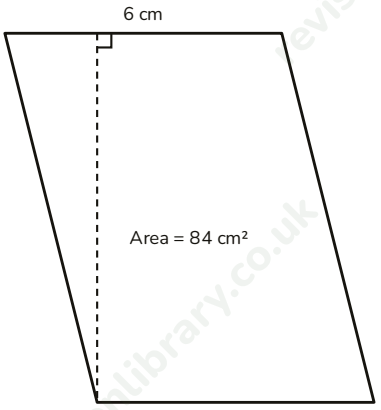


(3)

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15 A parallelogram has area 84 cm² and base 6 cm. Work out the perpendicular height.

Diagram NOT accurately drawn



(2)

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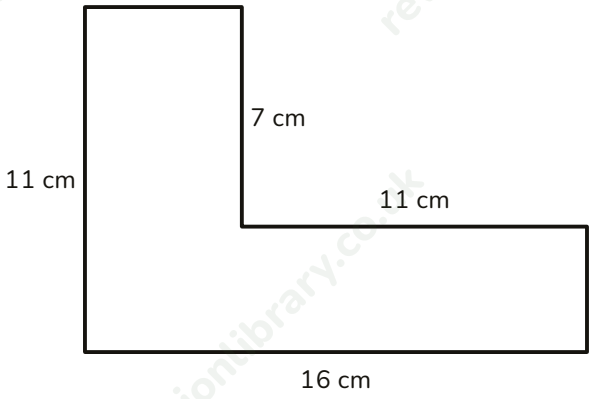
16 A wall is 8 m by 8 m. One tin of paint covers 6 m² and costs £5. Work out the cost of the paint needed. Only whole tins can be bought.

(3)

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17 An L-shape is made by taking a 16 cm by 11 cm rectangle and cutting a 11 cm by 7 cm rectangle out of one corner.
Work out the perimeter of the L-shape.

Diagram NOT accurately drawn

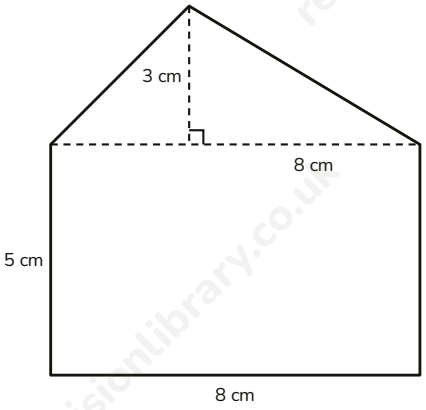


(3)

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18 A compound shape is made of a rectangle 8 cm by 5 cm and a triangle with base 8 cm and height 3 cm attached along one 8 cm side. Find the total area.

Diagram NOT accurately drawn



(2)

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Mark scheme · 4.8 Area of Parallelograms, Trapezia and Compound Shapes: 1-hour Pack

Question 1

63 = 1/2 (x + 8) x 6	M1
x + 8 = 21	M1
isolates x	M1
13 cm cao	A1

Answer: **13 cm**

Question 2

12 x 7 = 84	M1
5 x 2 = 10	M1
74 cm² cao	A1

Answer: **74 cm^2**

Question 3

16 x 8	M1
128 cm² cao	A1

Answer: **128 cm^2**

Question 4

identifies that the perimeter equals that of the enclosing rectangle	M1
2 x (8 + 8)	M1
32 cm cao	A1

Answer: **32 cm**

Question 5

9 x 7	M1
63 cm² cao	A1

Answer: **63 cm^2**

Question 6

Use height = area / base: 42 / 7 or equivalent	M1
6 m cao	A1

Answer: **6 m**

Question 7

19 x 14	M1
266 cm² cao	A1

Answer: **266 cm^2**

Question 8

30 = 1/2 (x + 4) x 6	M1
x + 4 = 10	M1
isolates x	M1
6 cm cao	A1

Answer: **6 cm**

Question 9

40 ÷ 8	M1
5 cm cao	A1

Answer: **5 cm**

Question 10

13 x 10	M1
130 cm² cao	A1

Answer: **130 cm^2**

Question 11

12 + 18 = 30	M1
1/2 x 30 x 12	M1
180 cm² cao	A1

Answer: **180 cm^2**

Question 12

area of floor in cm^2: 360000	M1
360000 ÷ 2500	M1
144 cao	A1

Answer: **144**

Question 13

11 x 9	M1
99 cm² cao	A1

Answer: **99 cm^2**

Question 14

14 x 12 = 168	M1
3 x 5 = 15	M1
153 cm² cao	A1

Answer: **153 cm^2**

Question 15

84 ÷ 6	M1
14 cm cao	A1

Answer: **14 cm**

Question 16

64 ÷ 6	M1
rounds up to 11 tins	M1
£55 cao	A1

Answer: **£55**

Question 17

identifies that the perimeter equals that of the enclosing rectangle	M1
2 x (16 + 11)	M1
54 cm cao	A1

Answer: **54 cm**

Question 18

Area rectangle 8 x 5 = 40 and triangle 1/2 x 8 x 3 = 12 used	M1
52 cm² cao	A1

Answer: **52 cm^2**

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