

WA4MMGME1

Non-spatial measurement

Core + Challenge

Area of Rectangles — Formula

I can find the area of a rectangle using the formula $\text{Area} = \text{length} \times \text{width}$.

Name: _____ Date: _____ Score: / 53

Key idea

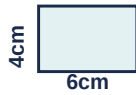
Area of a rectangle: $\text{Area} = \text{length} \times \text{width}$, measured in square units (e.g. cm^2 or m^2).

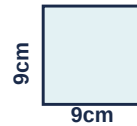
E.g. a rectangle 6cm by 4cm: $\text{Area} = 6 \times 4 = \mathbf{24\text{cm}^2}$.

A**Fluency** *practise the skill***/16 marks**

Find the area of each rectangle.

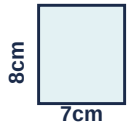
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1. $6\text{cm} \times 4\text{cm}$. Area = ?


9. $9\text{cm} \times 9\text{cm}$. Area = ?


2. $9\text{cm} \times 5\text{cm}$. Area = ?

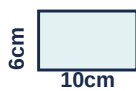

10. $13\text{cm} \times 5\text{cm}$. Area = ?

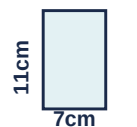

3. $7\text{cm} \times 8\text{cm}$. Area = ?


11. $14\text{cm} \times 6\text{cm}$. Area = ?


4. $12\text{cm} \times 3\text{cm}$. Area = ?

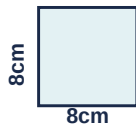

12. $20\text{cm} \times 3\text{cm}$. Area = ?


5. $10\text{cm} \times 6\text{cm}$. Area = ?


13. $7\text{cm} \times 11\text{cm}$. Area = ?

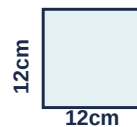

6. $11\text{cm} \times 4\text{cm}$. Area = ?


14. $16\text{cm} \times 4\text{cm}$. Area = ?


7. $8\text{cm} \times 8\text{cm}$. Area = ?


15. $18\text{cm} \times 5\text{cm}$. Area = ?


8. $15\text{cm} \times 2\text{cm}$. Area = ?


16. $12\text{cm} \times 12\text{cm}$. Area = ?

B

Core *apply the skill to problems*

/21 marks

1

A rectangular classroom floor is 9m long and 6m wide. What is the area of the floor?

[3 marks]

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Answer: _____

2

A rectangular garden is 8m long and 5m wide. (a) Find the area of the garden. (b) Grass seed covers 2m^2 per packet. How many packets are needed to cover the whole garden?

[4 marks]

Answer: _____

3

A rectangular poster is 70cm long and 50cm wide. What is the area of the poster in cm^2 ?

[3 marks]

Answer: _____

4

A rectangular swimming pool is 12m long and 6m wide. (a) Find the area of the pool's surface. (b) A pool cover costs \$9 per m^2 . What is the total cost of the pool cover?

[4 marks]

Answer: _____

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5

A rectangular vegetable patch is 4.5m long and 3m wide. What is the area of the patch?

[3 marks]

Answer: _____

6

A rectangular wall is 5m long and 2.4m high. A single tin of paint covers 6m^2 . (a) Find the area of the wall. (b) How many tins of paint are needed to cover the whole wall?

[4 marks]

Answer: _____

C

Reasoning *explain, justify and check*

/9 marks

1

Explain why the area of a rectangle is found by multiplying its length by its width, rather than adding them.

[2 marks]

2

A student says a rectangle 10cm by 2cm has the same area as a rectangle 6cm by 6cm, because $10 + 2 = 12$ and $6 + 6 = 12$. Explain the student's mistake and find the correct area of each rectangle.

[2 marks]

3

Explain why area is measured in square units (like cm^2 or m^2) rather than in cm or m.

[2 marks]

Area of Rectangles — Formula · WA4MMGME1

4

A student says that doubling the length of a rectangle will always double its area. Is this true? Explain, and use an example to support your answer.

[3 marks]

D

Challenge *multi-step and problem-solving*

/7 marks

1

A rectangle has an area of 48cm^2 and a width of 6cm. What is its length?

[2 marks]

Answer: _____

2

A square has the same area as a rectangle that is 9cm long and 4cm wide. What is the side length of the square?

[2 marks]

Answer: _____

3

A rectangular room is 3 times as long as it is wide. If its area is 48m^2 , what are its length and width?

[3 marks]

Answer: _____

How did I go?Fluency ___/16 Core ___/21 Reasoning ___/9 Challenge ___/7 **Total ___/53**

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