



THIRD SPACE  
LEARNING

# GCSE Exam Questions

Area of a Trapezium | Geometry  
& Measure

## GCSE Exam Questions: Area of a Trapezium

- 1) The diagram on the right shows a sandpit in the shape of a trapezium. Find the area of the trapezium.

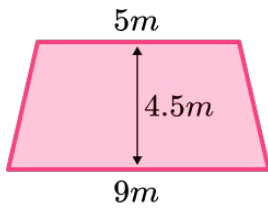


Diagram not drawn to scale

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(2 marks)

- 2) The area of the trapezium below is  $1.4\text{cm}^2$ . Calculate the value of  $x$ .

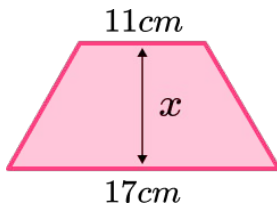


Diagram not drawn to scale

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(3 marks)

- 3) (a) A tower is to be built in the centre of a busy roundabout. Each external wall and the outside of the roof will be painted black. What is the total area of the painted surfaces?

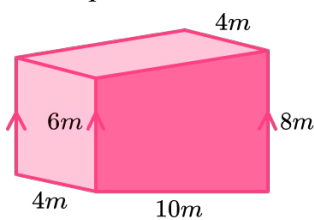


Diagram not drawn to scale

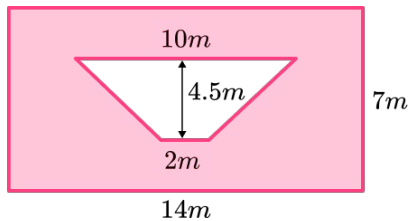
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(6)

- (b) Each can of paint costs £5.50 and covers an area of  $55\text{m}^2$ . How much will it cost to paint the tower?

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(2)  
(8 marks)

## GCSE Exam Questions: Area of a Trapezium

- 4) (a) A landscaper is designing a rectangular garden with a flower bed in the middle. The surrounding area will be covered in grass. What is the area of the grass?



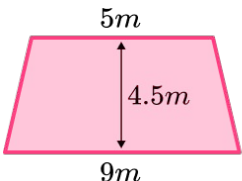
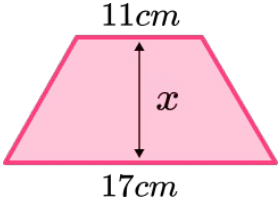
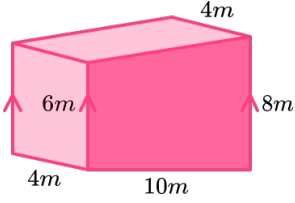
- (b) What percentage of the garden is covered by the flowerbed?  
Round your solution to 2 decimal places.

(3)

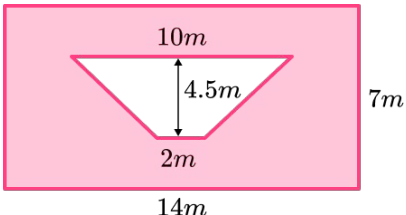
(2)

(5 marks)

# GCSE Exam Questions: Area of a Trapezium Answers

|        | Question  | Answer   | Marks   |
|--------|---|--|---|
| 1)     | <p>The diagram on the right shows a sandpit in the shape of a trapezium. Find the area of the trapezium.</p>  <p>Diagram not drawn to scale</p>  | $\frac{9 + 5}{2} \times 4.5 \text{ oe}$ $31.5m^2$  | <p>(1)</p> <p>(1)</p>   |
| 2)     | <p>The area of the trapezium on the right is <math>1.4cm^2</math>. Calculate the value of <math>x</math>.</p>  <p>Diagram not drawn to scale</p>   | $\frac{11 + 17}{2} \times x \text{ oe}$ $14x = 1.4 \text{ oe}$ $x = 0.1cm$   | <p>(1)</p> <p>(1)</p> <p>(1)</p>                                  |
| 3) (a) | <p>A tower is to be built in the centre of a busy roundabout. Each external wall and the outside of the roof will be painted black. What is the total area of the painted surfaces?</p>  <p>Diagram not drawn to scale</p> | <p>(a) <math>\frac{8 + 6}{2} \times 10 = 70m^2</math></p> $8 - 6 = 2m$ $\sqrt{2^2 + 10^2} = 2\sqrt{26} \text{ or } 10.198 \dots$ $4 \times 2\sqrt{26} = 8\sqrt{26} \text{ or } 40.792 \dots$ $6 \times 4 = 24m^2 \text{ and } 8 \times 4 = 32m^2$ <p>Total Surface Area</p> $140 + 8\sqrt{26} + 24 + 32 = 236.79m^2$ | <p>(1)</p> <p>(1)</p> <p>(1)</p> <p>(1)</p> <p>(1)</p> <p>(1)</p> |
| (b)    | <p>Each can of paint costs £5.50 and covers an area of <math>55m^2</math>. How much will it cost to paint the tower?</p>  | <p>(b) <math>240 \div 55 = 4.36 \text{ or } 5 \text{ tins seen}</math></p> $5 \times 5.50 = £27.50$  | <p>(1)</p> <p>(1)</p>   |

## GCSE Exam Questions: Area of a Trapezium Answers

|               | Question   | Answer   | Marks   |
|---------------|--|--|---|
| <b>4) (a)</b> | <p>A landscaper is designing a rectangular garden with a flower bed in the middle. The surrounding area will be covered in grass. What is the area of the grass?</p>  | <p><b>(a)</b> <math>14 \times 7 = 98m^2</math></p> <p><math>\frac{2 + 10}{2} \times 4.5 = 27m^2</math></p> <p><math>98 - 27 = 71m^2</math></p> | <p><b>(1)</b></p> <p><b>(1)</b></p> <p><b>(1)</b></p> |
| <b>(b)</b>    | <p>What percentage of the garden is covered by the flowerbed? Round your solution to 2 decimal places.</p>   | <p><b>(b)</b> <math>\frac{27}{98} oe</math></p> <p>27.55%</p>  | <p><b>(1)</b></p> <p><b>(1)</b></p>                   |

# Where to go next?

For more diagnostic questions, and GCSE maths revision resources and worksheets to support students in fixing any misconceptions take a look at the free Third Space Learning [GCSE maths revision](#) pages.

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