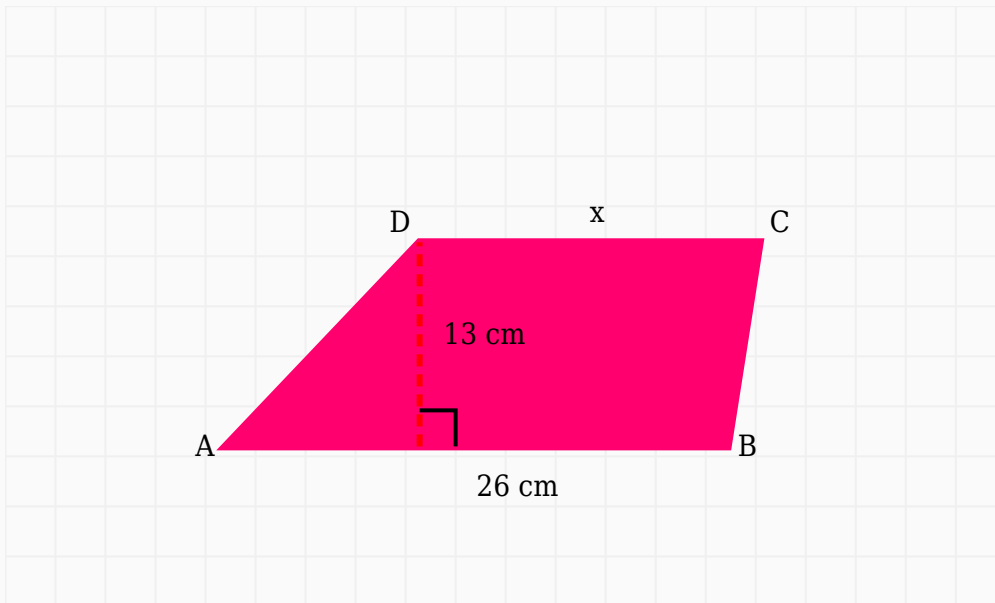


Area of Trapezium Worksheet

Question 1

The area of a trapezium is 221 cm^2 . One parallel side is 26 cm and height is 13 cm . Find the other parallel side.



Solution:

Formula: $\text{Area} = \text{Height} \times (\text{a} + \text{b}) \div 2$

$$221 = 13 \times (x + 26) \div 2$$

$$442 = 13 \times (x + 26)$$

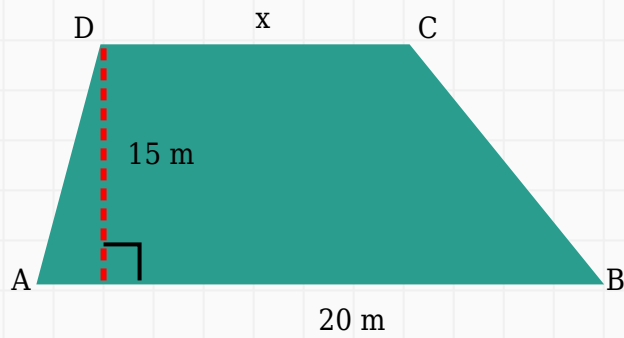
$$34 = x + 26$$

$$x = 8 \text{ cm}$$

Answer: 8 cm

Question 2

The area of a trapezium is 225 m^2 . One parallel side is 20 m and height is 15 m . Find the other parallel side.



Solution:

Formula: Area = Height \times (a + b) \div 2

$$225 = 15 \times (x + 20) \div 2$$

$$450 = 15 \times (x + 20)$$

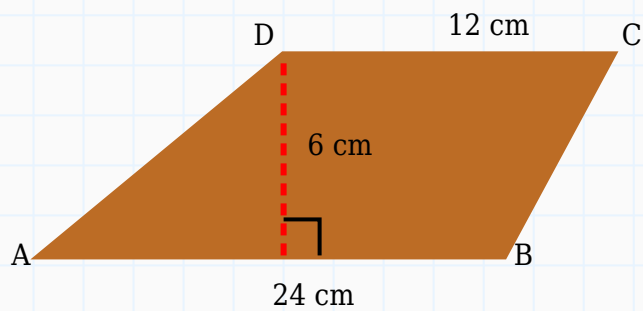
$$30 = x + 20$$

$$x = 10 \text{ m}$$

Answer: 10 m

Question 3

Find the area of the trapezium having parallel sides 12 cm and 24 cm with height 6 cm.



Solution:

Formula: Area = Height \times (Sum of parallel sides) \div 2

$$\text{Area} = 6 \times (12 + 24) \div 2$$

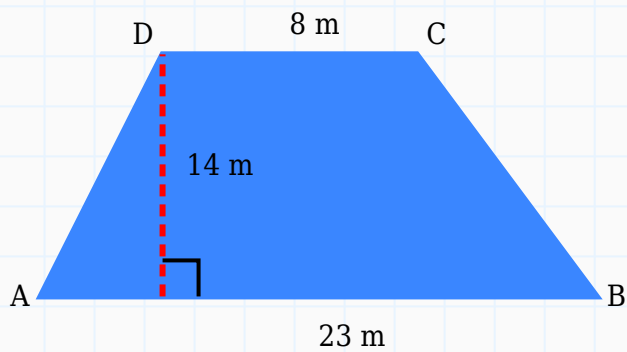
$$\text{Area} = 6 \times 36 \div 2$$

$$\text{Area} = 108 \text{ cm}^2$$

Answer: 108 cm²

Question 4

Find the area of the trapezium having parallel sides 8 m and 23 m with height 14 m.



Solution:

Formula: Area = Height \times (Sum of parallel sides) \div 2

$$\text{Area} = 14 \times (8 + 23) \div 2$$

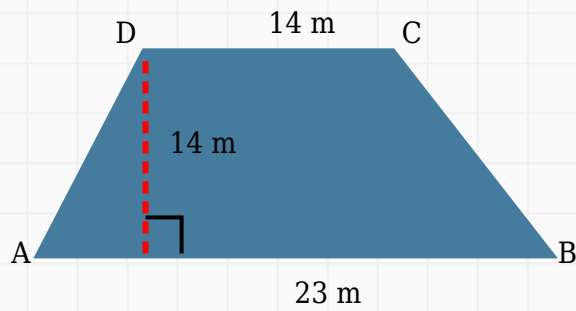
$$\text{Area} = 14 \times 31 \div 2$$

$$\text{Area} = 217 \text{ m}^2$$

Answer: 217 m²

Question 5

Find the area of the trapezium having parallel sides 14 m and 23 m with height 14 m.



Solution:

Formula: $\text{Area} = \text{Height} \times (\text{Sum of parallel sides}) \div 2$

$$\text{Area} = 14 \times (14 + 23) \div 2$$

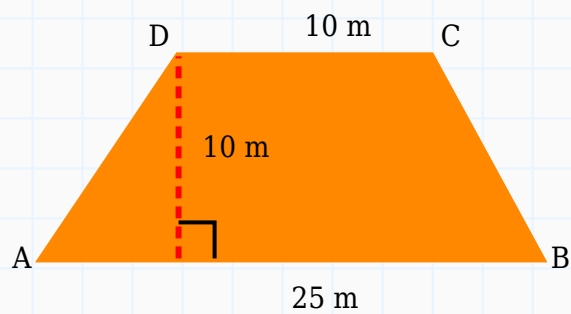
$$\text{Area} = 14 \times 37 \div 2$$

$$\text{Area} = 259 \text{ m}^2$$

Answer: 259 m^2

Question 6

Find the area of the trapezium having parallel sides 10 m and 25 m with height 10 m.



Solution:

Formula: $\text{Area} = \text{Height} \times (\text{Sum of parallel sides}) \div 2$

$$\text{Area} = 10 \times (10 + 25) \div 2$$

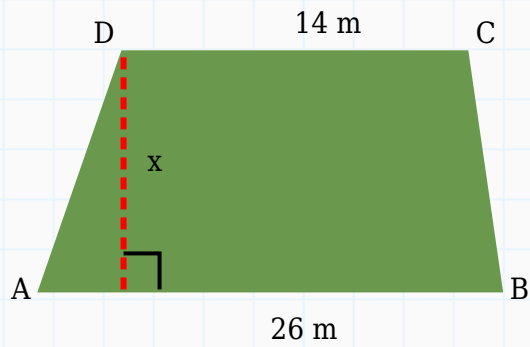
$$\text{Area} = 10 \times 35 \div 2$$

$$\text{Area} = 175 \text{ m}^2$$

Answer: 175 m^2

Question 7

The area of a trapezium is 80 m^2 . Its parallel sides are 14 m and 26 m. Find the height.



Solution:

Formula: Height = (2 × Area) ÷ Sum of parallel sides

$$\text{Height} = (2 \times 80) \div (14 + 26)$$

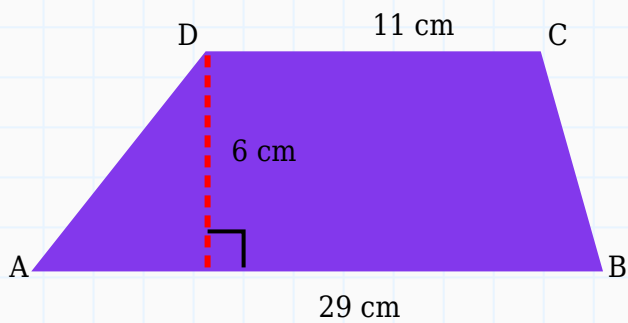
$$\text{Height} = 160 \div 40$$

$$\text{Height} = 4 \text{ m}$$

Answer: 4 m

Question 8

Find the area of the trapezium having parallel sides 11 cm and 29 cm with height 6 cm.



Solution:

Formula: Area = Height \times (Sum of parallel sides) \div 2

$$\text{Area} = 6 \times (11 + 29) \div 2$$

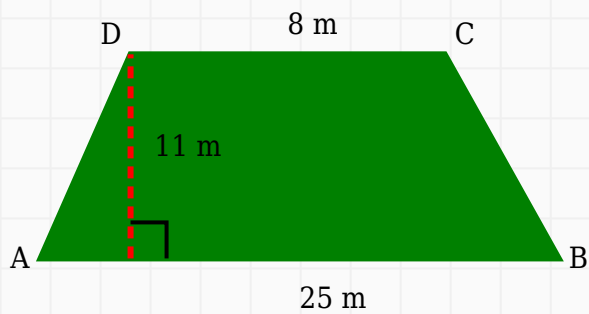
$$\text{Area} = 6 \times 40 \div 2$$

$$\text{Area} = 120 \text{ cm}^2$$

Answer: 120 cm²

Question 9

Find the area of the trapezium having parallel sides 8 m and 25 m with height 11 m.



Solution:

Formula: Area = Height \times (Sum of parallel sides) \div 2

$$\text{Area} = 11 \times (8 + 25) \div 2$$

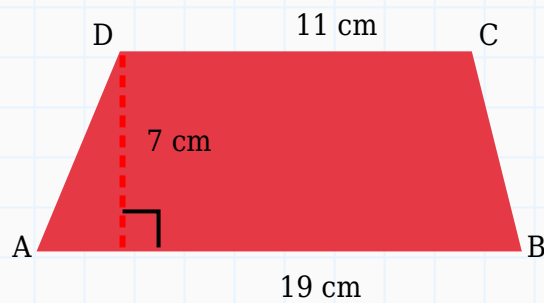
$$\text{Area} = 11 \times 33 \div 2$$

$$\text{Area} = 181.5 \text{ m}^2$$

Answer: 181.5 m²

Question 10

Find the area of the trapezium having parallel sides 11 cm and 19 cm with height 7 cm.



Solution:

Formula: $\text{Area} = \text{Height} \times (\text{Sum of parallel sides}) \div 2$

$$\text{Area} = 7 \times (11 + 19) \div 2$$

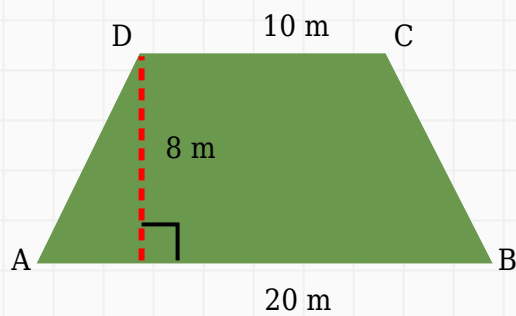
$$\text{Area} = 7 \times 30 \div 2$$

$$\text{Area} = 105 \text{ cm}^2$$

Answer: 105 cm^2

Question 11

Find the area of the trapezium having parallel sides 10 m and 20 m with height 8 m.



Solution:

Formula: Area = Height \times (Sum of parallel sides) \div 2

$$\text{Area} = 8 \times (10 + 20) \div 2$$

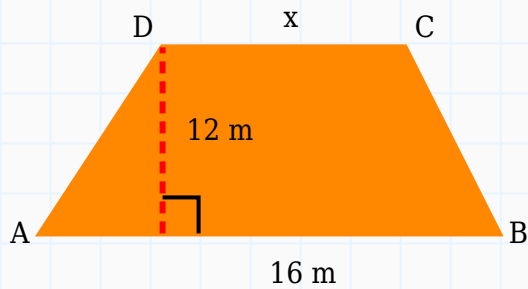
$$\text{Area} = 8 \times 30 \div 2$$

$$\text{Area} = 120 \text{ m}^2$$

Answer: 120 m²

Question 12

The area of a trapezium is 168 m². One parallel side is 16 m and height is 12 m. Find the other parallel side.



Solution:

Formula: Area = Height \times (a + b) \div 2

$$168 = 12 \times (x + 16) \div 2$$

$$336 = 12 \times (x + 16)$$

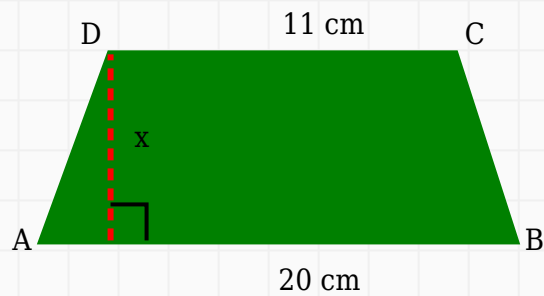
$$28 = x + 16$$

$$x = 12 \text{ m}$$

Answer: 12 m

Question 13

The area of a trapezium is 108.5 cm^2 . Its parallel sides are 11 cm and 20 cm. Find the height.



Solution:

Formula: Height = $(2 \times \text{Area}) \div \text{Sum of parallel sides}$

$$\text{Height} = (2 \times 108.5) \div (11 + 20)$$

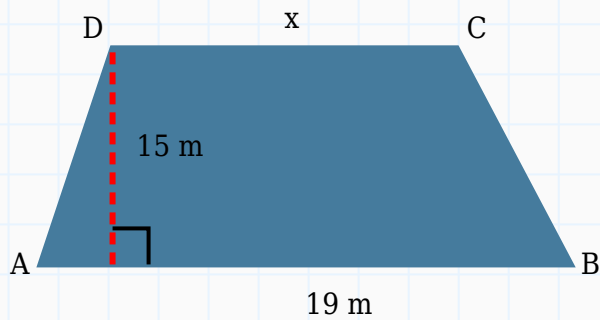
$$\text{Height} = 217 \div 31$$

$$\text{Height} = 7 \text{ cm}$$

Answer: 7 cm

Question 14

The area of a trapezium is 217.5 m^2 . One parallel side is 19 m and height is 15 m. Find the other parallel side.



Solution:

Formula: Area = Height \times (a + b) \div 2

$$217.5 = 15 \times (x + 19) \div 2$$

$$435 = 15 \times (x + 19)$$

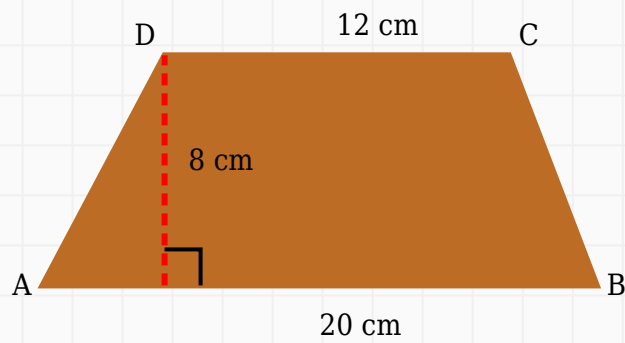
$$29 = x + 19$$

$$x = 10 \text{ m}$$

Answer: 10 m

Question 15

Find the area of the trapezium having parallel sides 12 cm and 20 cm with height 8 cm.



Solution:

Formula: Area = Height × (Sum of parallel sides) ÷ 2

$$\text{Area} = 8 \times (12 + 20) \div 2$$

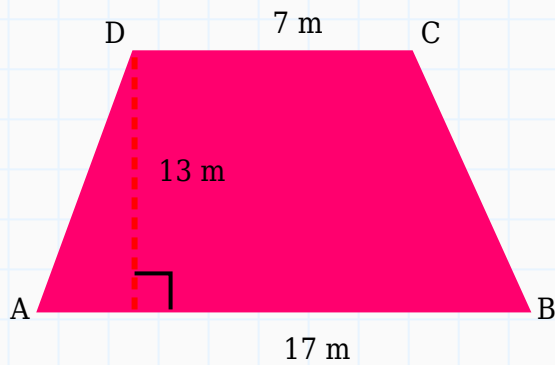
$$\text{Area} = 8 \times 32 \div 2$$

$$\text{Area} = 128 \text{ cm}^2$$

Answer: 128 cm²

Question 16

Find the area of the trapezium having parallel sides 7 m and 17 m with height 13 m.



Solution:

Formula: $\text{Area} = \text{Height} \times (\text{Sum of parallel sides}) \div 2$

$$\text{Area} = 13 \times (7 + 17) \div 2$$

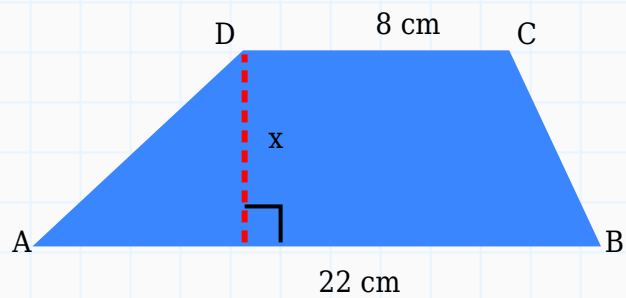
$$\text{Area} = 13 \times 24 \div 2$$

$$\text{Area} = 156 \text{ m}^2$$

Answer: 156 m^2

Question 17

The area of a trapezium is 105 cm^2 . Its parallel sides are 8 cm and 22 cm. Find the height.



Solution:

Formula: Height = $(2 \times \text{Area}) \div \text{Sum of parallel sides}$

$$\text{Height} = (2 \times 105) \div (8 + 22)$$

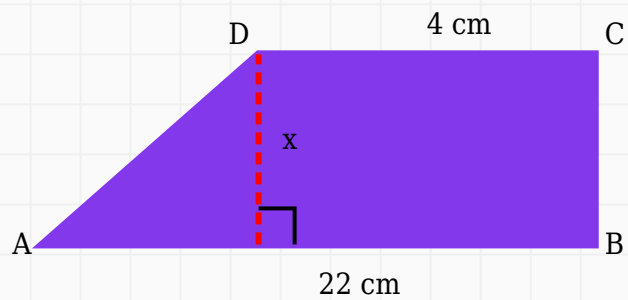
$$\text{Height} = 210 \div 30$$

$$\text{Height} = 7 \text{ cm}$$

Answer: 7 cm

Question 18

The area of a trapezium is 65 cm^2 . Its parallel sides are 4 cm and 22 cm. Find the height.



Solution:

Formula: Height = $(2 \times \text{Area}) \div \text{Sum of parallel sides}$

$$\text{Height} = (2 \times 65) \div (4 + 22)$$

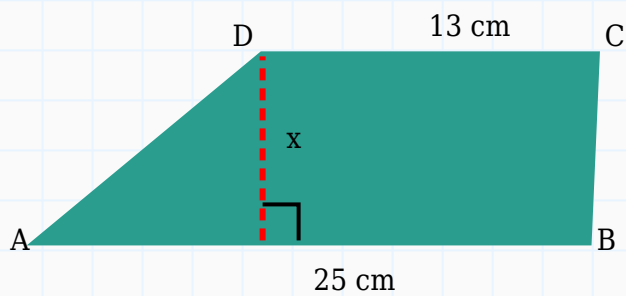
$$\text{Height} = 130 \div 26$$

$$\text{Height} = 5 \text{ cm}$$

Answer: 5 cm

Question 19

The area of a trapezium is 190 cm^2 . Its parallel sides are 13 cm and 25 cm. Find the height.



Solution:

Formula: Height = $(2 \times \text{Area}) \div \text{Sum of parallel sides}$

$$\text{Height} = (2 \times 190) \div (13 + 25)$$

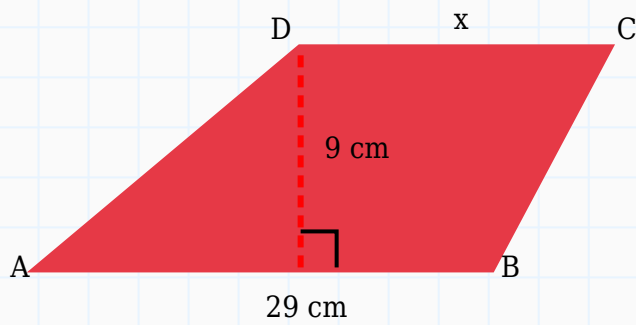
$$\text{Height} = 380 \div 38$$

$$\text{Height} = 10 \text{ cm}$$

Answer: 10 cm

Question 20

The area of a trapezium is 175.5 cm^2 . One parallel side is 29 cm and height is 9 cm. Find the other parallel side.



Solution:

Formula: Area = Height \times (a + b) \div 2

$$175.5 = 9 \times (x + 29) \div 2$$

$$351 = 9 \times (x + 29)$$

$$39 = x + 29$$

$$x = 10 \text{ cm}$$

Answer: 10 cm