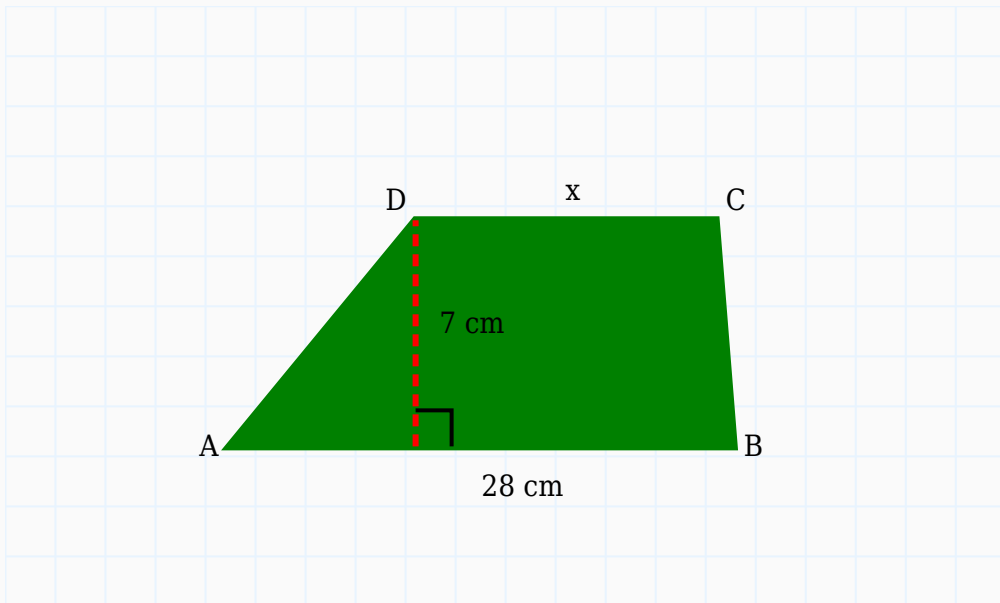


Area of Trapezium Worksheet

Question 1

The area of a trapezium is 119 cm^2 . One parallel side is 28 cm and height is 7 cm . Find the other parallel side.



Solution:

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

$$119 = 7 \times (x + 28) \div 2$$

$$238 = 7 \times (x + 28)$$

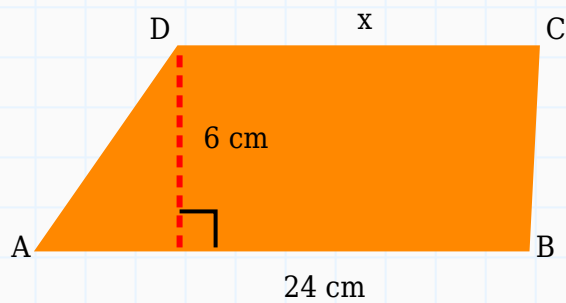
$$34 = x + 28$$

$$x = 6 \text{ cm}$$

Answer: 6 cm

Question 2

The area of a trapezium is 87 cm^2 . One parallel side is 24 cm and height is 6 cm . Find the other parallel side.



Solution:

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

$$87 = 6 \times (x + 24) \div 2$$

$$174 = 6 \times (x + 24)$$

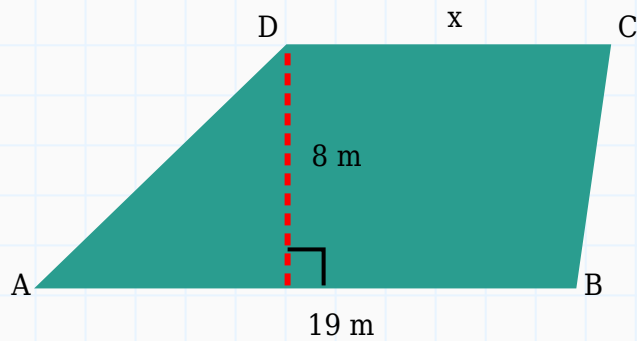
$$29 = x + 24$$

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

Answer: 5 cm

Question 3

The area of a trapezium is 132 m^2 . One parallel side is 19 m and height is 8 m. Find the other parallel side.



Solution:

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

$$132 = 8 \times (x + 19) \div 2$$

$$264 = 8 \times (x + 19)$$

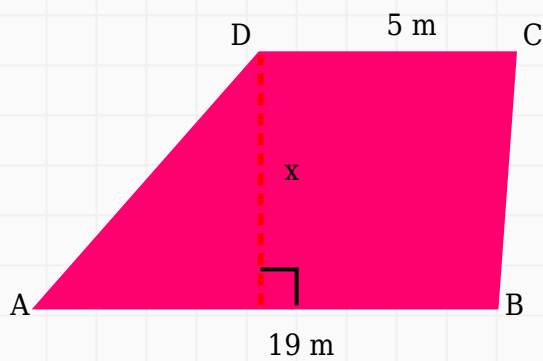
$$33 = x + 19$$

$$x = 14 \text{ m}$$

Answer: 14 m

Question 4

The area of a trapezium is 108 m^2 . Its parallel sides are 5 m and 19 m. Find the height.



Solution:

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

$$\text{Height} = (2 \times 108) \div (5 + 19)$$

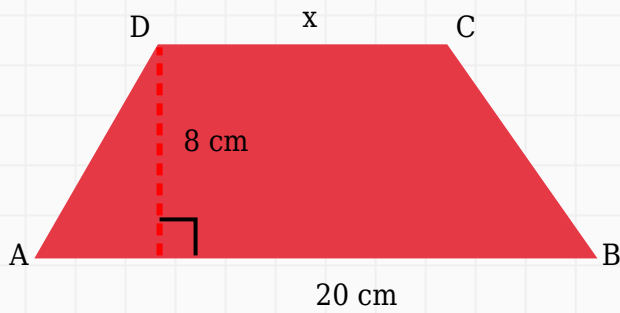
$$\text{Height} = 216 \div 24$$

$$\text{Height} = 9 \text{ m}$$

Answer: 9 m

Question 5

The area of a trapezium is 128 cm^2 . One parallel side is 20 cm and height is 8 cm. Find the other parallel side.



Solution:

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

$$128 = 8 \times (x + 20) \div 2$$

$$256 = 8 \times (x + 20)$$

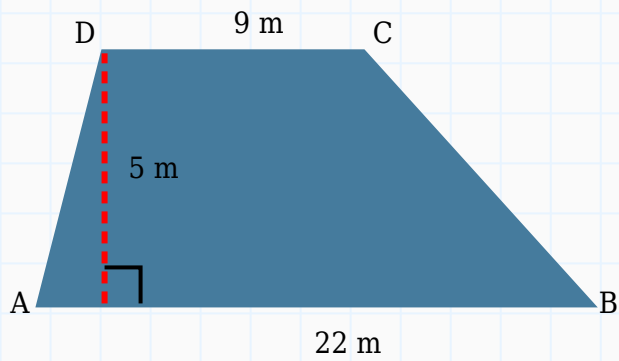
$$32 = x + 20$$

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

Answer: 12 cm

Question 6

Find the area of the trapezium having parallel sides 9 m and 22 m with height 5 m.



Solution:

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

$$\text{Area} = 5 \times (9 + 22) \div 2$$

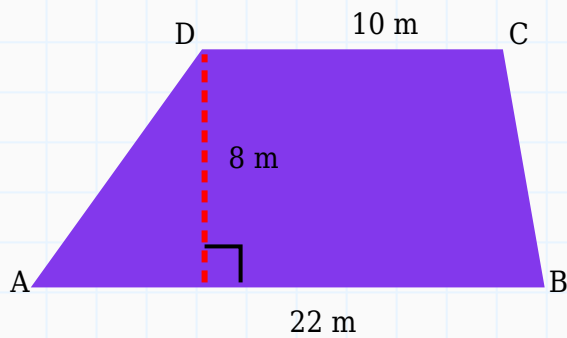
$$\text{Area} = 5 \times 31 \div 2$$

$$\text{Area} = 77.5 \text{ m}^2$$

Answer: 77.5 m²

Question 7

Find the area of the trapezium having parallel sides 10 m and 22 m with height 8 m.



Solution:

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

$$\text{Area} = 8 \times (10 + 22) \div 2$$

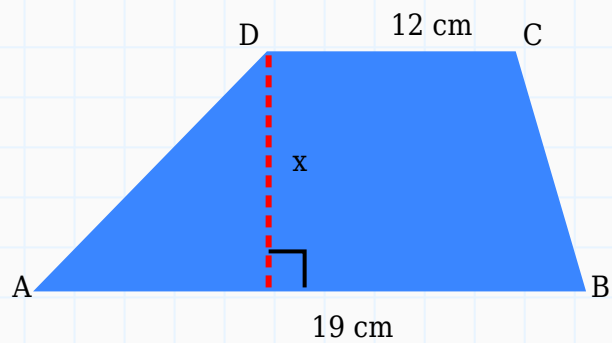
$$\text{Area} = 8 \times 32 \div 2$$

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

Answer: 128 m^2

Question 8

The area of a trapezium is 170.5 cm^2 . Its parallel sides are 12 cm and 19 cm. Find the height.



Solution:

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

$$\text{Height} = (2 \times 170.5) \div (12 + 19)$$

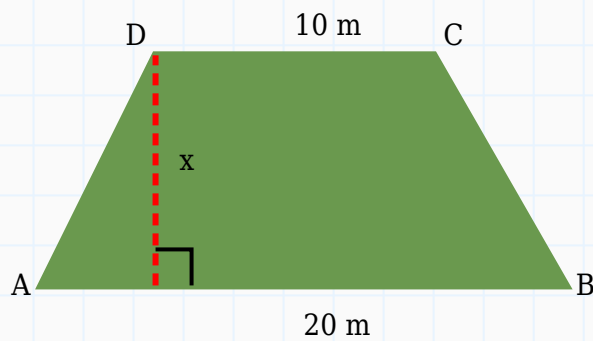
$$\text{Height} = 341 \div 31$$

$$\text{Height} = 11 \text{ cm}$$

Answer: 11 cm

Question 9

The area of a trapezium is 225 m^2 . Its parallel sides are 10 m and 20 m. Find the height.



Solution:

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

$$\text{Height} = (2 \times 225) \div (10 + 20)$$

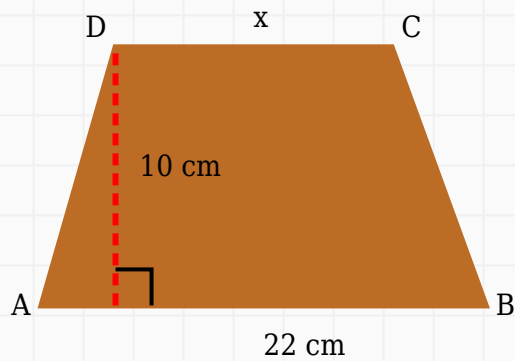
$$\text{Height} = 450 \div 30$$

$$\text{Height} = 15 \text{ m}$$

Answer: 15 m

Question 10

The area of a trapezium is 170 cm^2 . One parallel side is 22 cm and height is 10 cm. Find the other parallel side.



Solution:

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

$$170 = 10 \times (x + 22) \div 2$$

$$340 = 10 \times (x + 22)$$

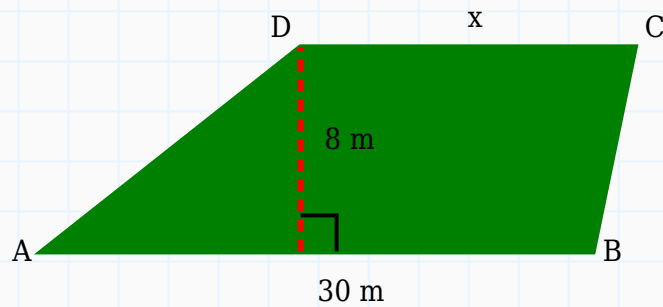
$$34 = x + 22$$

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

Answer: 12 cm

Question 11

The area of a trapezium is 156 m^2 . One parallel side is 30 m and height is 8 m. Find the other parallel side.



Solution:

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

$$156 = 8 \times (x + 30) \div 2$$

$$312 = 8 \times (x + 30)$$

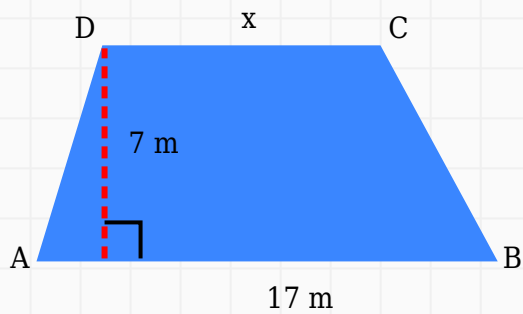
$$39 = x + 30$$

$$x = 9 \text{ m}$$

Answer: 9 m

Question 12

The area of a trapezium is 77 m^2 . One parallel side is 17 m and height is 7 m. Find the other parallel side.



Solution:

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

$$77 = 7 \times (x + 17) \div 2$$

$$154 = 7 \times (x + 17)$$

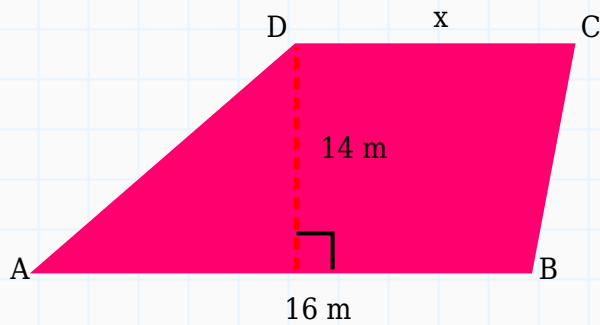
$$22 = x + 17$$

$$x = 5 \text{ m}$$

Answer: 5 m

Question 13

The area of a trapezium is 140 m^2 . One parallel side is 16 m and height is 14 m. Find the other parallel side.



Solution:

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

$$140 = 14 \times (x + 16) \div 2$$

$$280 = 14 \times (x + 16)$$

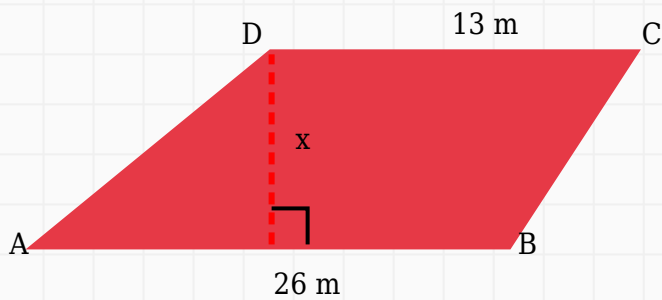
$$20 = x + 16$$

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

Answer: 4 m

Question 14

The area of a trapezium is 117 m^2 . Its parallel sides are 13 m and 26 m. Find the height.



Solution:

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

$$\text{Height} = (2 \times 117) \div (13 + 26)$$

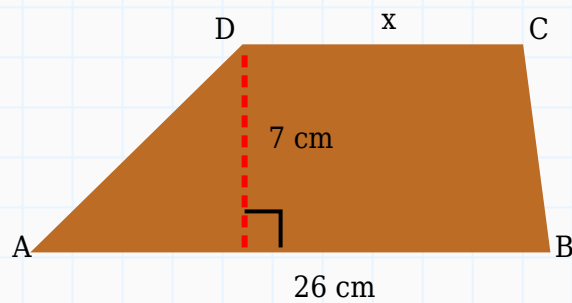
$$\text{Height} = 234 \div 39$$

$$\text{Height} = 6 \text{ m}$$

Answer: 6 m

Question 15

The area of a trapezium is 122.5 cm^2 . One parallel side is 26 cm and height is 7 cm. Find the other parallel side.



Solution:

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

$$122.5 = 7 \times (x + 26) \div 2$$

$$245 = 7 \times (x + 26)$$

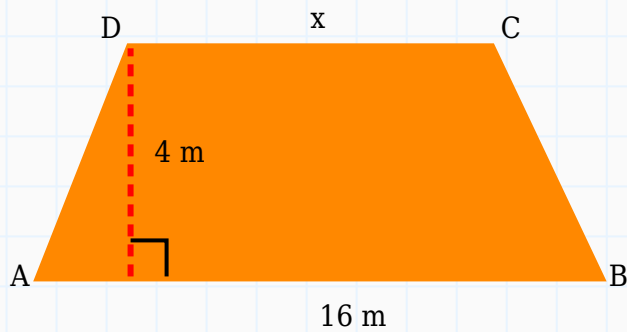
$$35 = x + 26$$

$$x = 9 \text{ cm}$$

Answer: 9 cm

Question 16

The area of a trapezium is 50 m^2 . One parallel side is 16 m and height is 4 m. Find the other parallel side.



Solution:

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

$$50 = 4 \times (x + 16) \div 2$$

$$100 = 4 \times (x + 16)$$

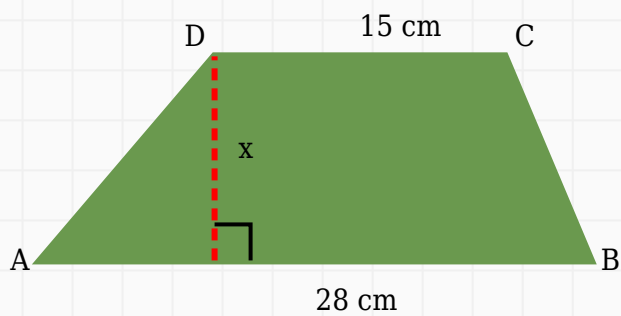
$$25 = x + 16$$

$$x = 9 \text{ m}$$

Answer: 9 m

Question 17

The area of a trapezium is 215 cm^2 . Its parallel sides are 15 cm and 28 cm. Find the height.



Solution:

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

$$\text{Height} = (2 \times 215) \div (15 + 28)$$

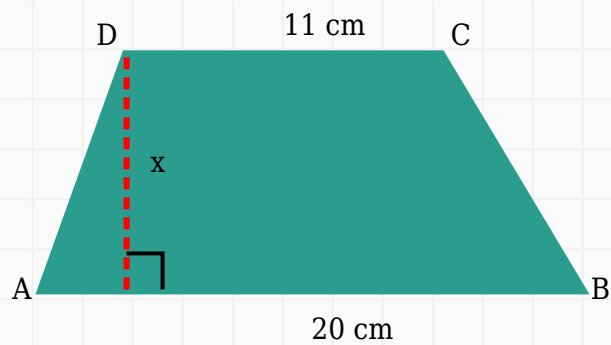
$$\text{Height} = 430 \div 43$$

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

Answer: 10 cm

Question 18

The area of a trapezium is 170.5 cm^2 . Its parallel sides are 11 cm and 20 cm. Find the height.



Solution:

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

$$\text{Height} = (2 \times 170.5) \div (11 + 20)$$

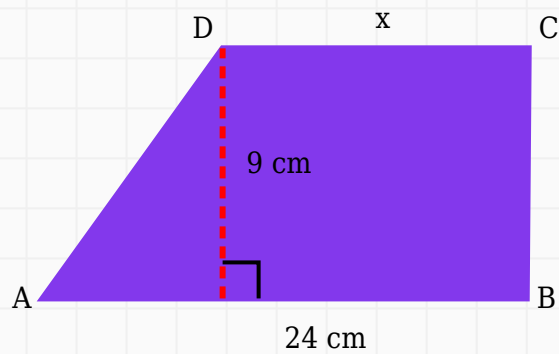
$$\text{Height} = 341 \div 31$$

$$\text{Height} = 11 \text{ cm}$$

Answer: 11 cm

Question 19

The area of a trapezium is 175.5 cm^2 . One parallel side is 24 cm and height is 9 cm. Find the other parallel side.



Solution:

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

$$175.5 = 9 \times (x + 24) \div 2$$

$$351 = 9 \times (x + 24)$$

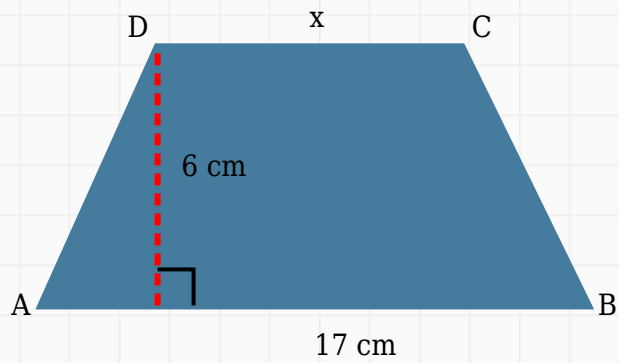
$$39 = x + 24$$

$$x = 15 \text{ cm}$$

Answer: 15 cm

Question 20

The area of a trapezium is 90 cm^2 . One parallel side is 17 cm and height is 6 cm. Find the other parallel side.



Solution:

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

$$90 = 6 \times (x + 17) \div 2$$

$$180 = 6 \times (x + 17)$$

$$30 = x + 17$$

$$x = 13 \text{ cm}$$

Answer: 13 cm