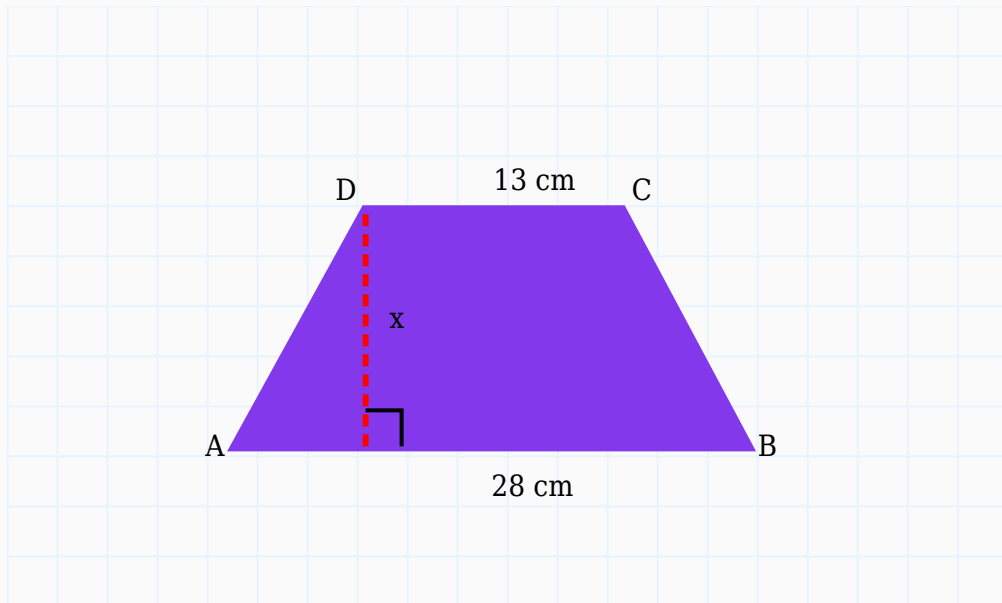


Area of Trapezium Worksheet

Question 1

The area of a trapezium is 246 cm^2 . Its parallel sides are 13 cm and 28 cm. Find the height.



Solution:

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

$$\text{Height} = (2 \times 246) \div (13 + 28)$$

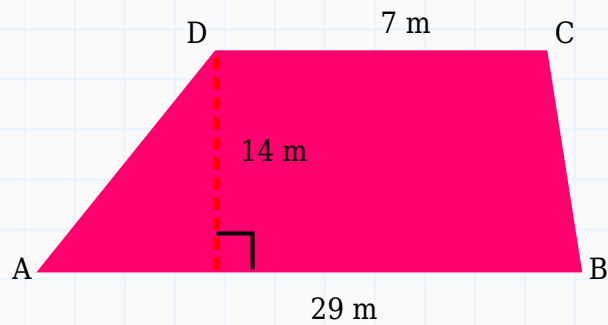
$$\text{Height} = 492 \div 41$$

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

Answer: 12 cm

Question 2

Find the area of the trapezium having parallel sides 7 m and 29 m with height 14 m.



Solution:

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

$$\text{Area} = 14 \times (7 + 29) \div 2$$

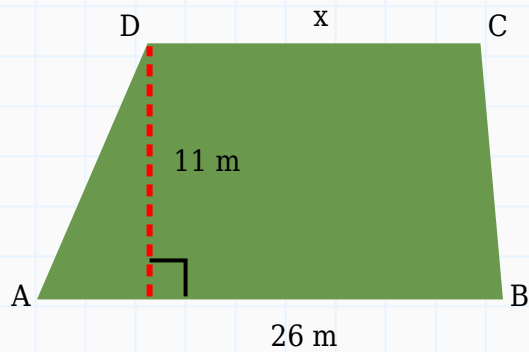
$$\text{Area} = 14 \times 36 \div 2$$

$$\text{Area} = 252 \text{ m}^2$$

Answer: 252 m^2

Question 3

The area of a trapezium is 176 m^2 . One parallel side is 26 m and height is 11 m. Find the other parallel side.



Solution:

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

$$176 = 11 \times (x + 26) \div 2$$

$$352 = 11 \times (x + 26)$$

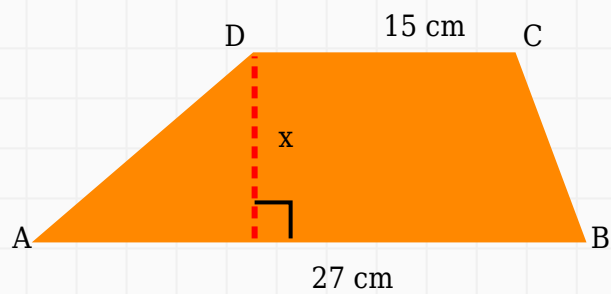
$$32 = x + 26$$

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

Answer: 6 m

Question 4

The area of a trapezium is 294 cm^2 . Its parallel sides are 15 cm and 27 cm. Find the height.



Solution:

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

$$\text{Height} = (2 \times 294) \div (15 + 27)$$

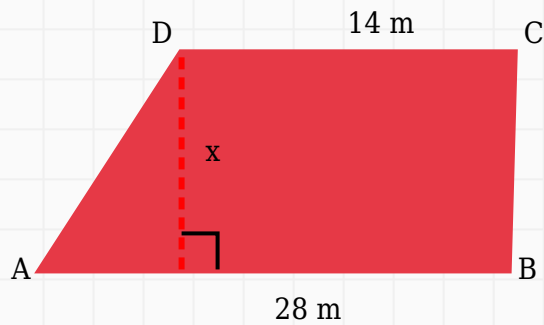
$$\text{Height} = 588 \div 42$$

$$\text{Height} = 14 \text{ cm}$$

Answer: 14 cm

Question 5

The area of a trapezium is 294 m^2 . Its parallel sides are 14 m and 28 m. Find the height.



Solution:

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

$$\text{Height} = (2 \times 294) \div (14 + 28)$$

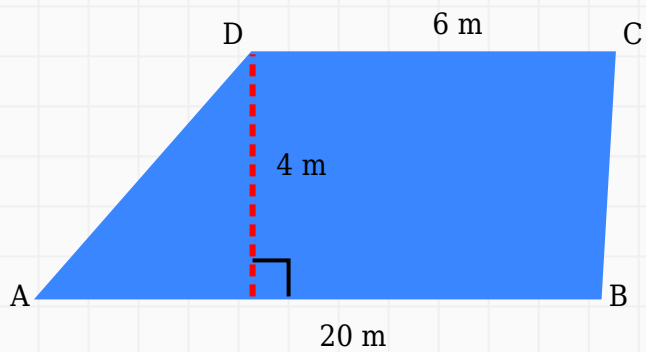
$$\text{Height} = 588 \div 42$$

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

Answer: 14 m

Question 6

Find the area of the trapezium having parallel sides 6 m and 20 m with height 4 m.



Solution:

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

$$\text{Area} = 4 \times (6 + 20) \div 2$$

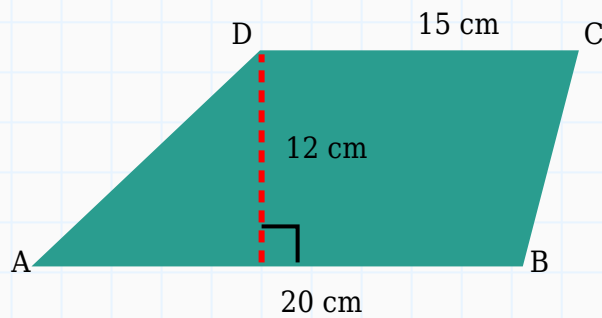
$$\text{Area} = 4 \times 26 \div 2$$

$$\text{Area} = 52 \text{ m}^2$$

Answer: 52 m^2

Question 7

Find the area of the trapezium having parallel sides 15 cm and 20 cm with height 12 cm.



Solution:

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

$$\text{Area} = 12 \times (15 + 20) \div 2$$

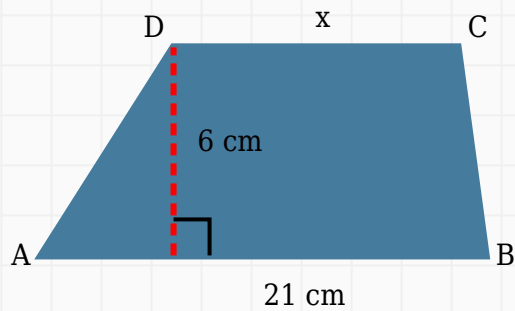
$$\text{Area} = 12 \times 35 \div 2$$

$$\text{Area} = 210 \text{ cm}^2$$

Answer: 210 cm^2

Question 8

The area of a trapezium is 99 cm^2 . One parallel side is 21 cm and height is 6 cm. Find the other parallel side.



Solution:

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

$$99 = 6 \times (x + 21) \div 2$$

$$198 = 6 \times (x + 21)$$

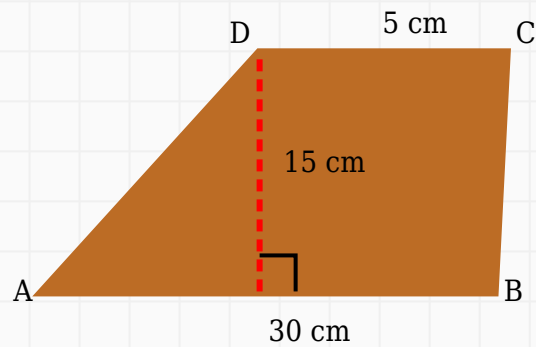
$$33 = x + 21$$

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

Answer: 12 cm

Question 9

Find the area of the trapezium having parallel sides 5 cm and 30 cm with height 15 cm.



Solution:

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

$$\text{Area} = 15 \times (5 + 30) \div 2$$

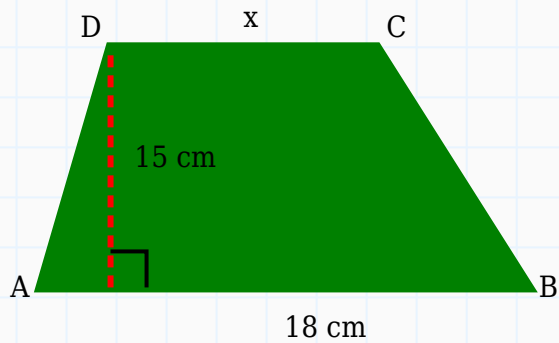
$$\text{Area} = 15 \times 35 \div 2$$

$$\text{Area} = 262.5 \text{ cm}^2$$

Answer: 262.5 cm^2

Question 10

The area of a trapezium is 217.5 cm^2 . One parallel side is 18 cm and height is 15 cm. Find the other parallel side.



Solution:

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

$$217.5 = 15 \times (x + 18) \div 2$$

$$435 = 15 \times (x + 18)$$

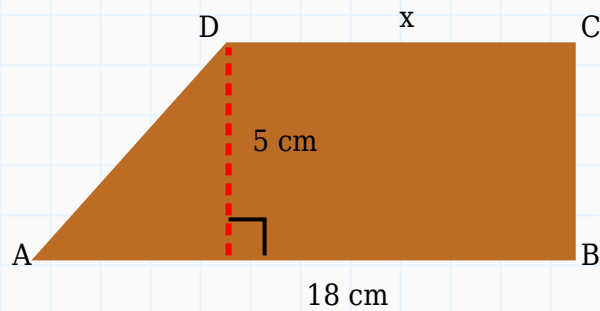
$$29 = x + 18$$

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

Answer: 11 cm

Question 11

The area of a trapezium is 62.5 cm^2 . One parallel side is 18 cm and height is 5 cm. Find the other parallel side.



Solution:

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

$$62.5 = 5 \times (x + 18) \div 2$$

$$125 = 5 \times (x + 18)$$

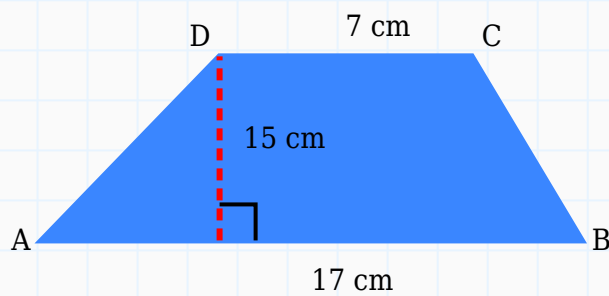
$$25 = x + 18$$

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

Answer: 7 cm

Question 12

Find the area of the trapezium having parallel sides 7 cm and 17 cm with height 15 cm.



Solution:

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

$$\text{Area} = 15 \times (7 + 17) \div 2$$

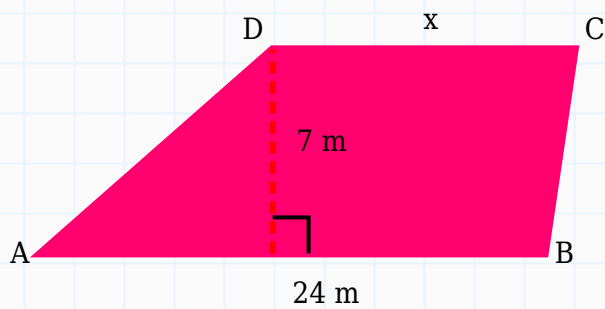
$$\text{Area} = 15 \times 24 \div 2$$

$$\text{Area} = 180 \text{ cm}^2$$

Answer: 180 cm^2

Question 13

The area of a trapezium is 133 m^2 . One parallel side is 24 m and height is 7 m. Find the other parallel side.



Solution:

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

$$133 = 7 \times (x + 24) \div 2$$

$$266 = 7 \times (x + 24)$$

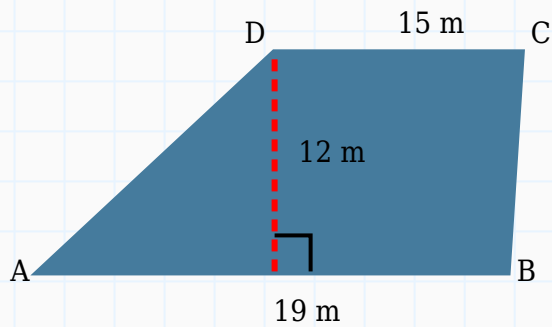
$$38 = x + 24$$

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

Answer: 14 m

Question 14

Find the area of the trapezium having parallel sides 15 m and 19 m with height 12 m.



Solution:

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

$$\text{Area} = 12 \times (15 + 19) \div 2$$

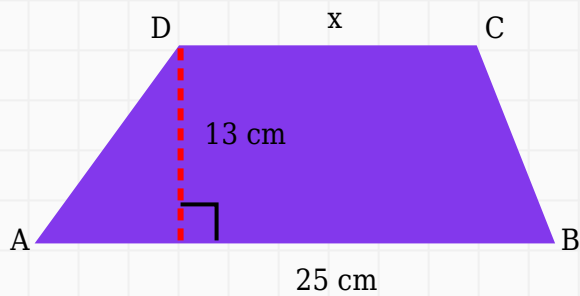
$$\text{Area} = 12 \times 34 \div 2$$

$$\text{Area} = 204 \text{ m}^2$$

Answer: 204 m^2

Question 15

The area of a trapezium is 260 cm^2 . One parallel side is 25 cm and height is 13 cm. Find the other parallel side.



Solution:

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

$$260 = 13 \times (x + 25) \div 2$$

$$520 = 13 \times (x + 25)$$

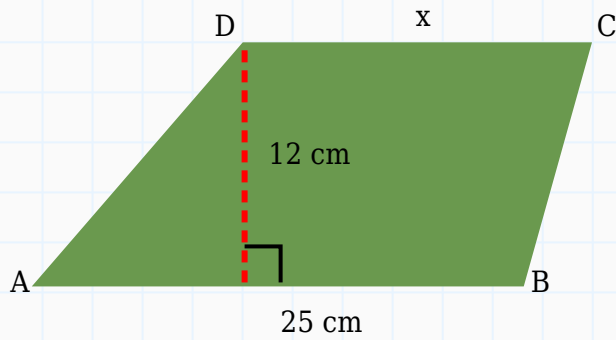
$$40 = x + 25$$

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

Answer: 15 cm

Question 16

The area of a trapezium is 210 cm^2 . One parallel side is 25 cm and height is 12 cm. Find the other parallel side.



Solution:

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

$$210 = 12 \times (x + 25) \div 2$$

$$420 = 12 \times (x + 25)$$

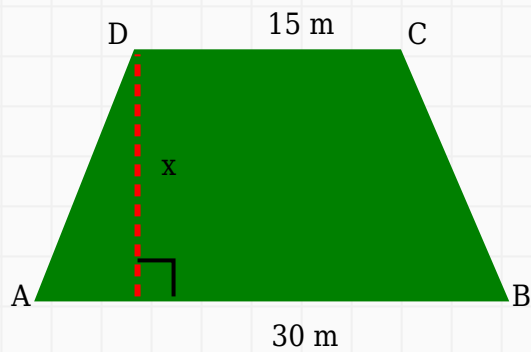
$$35 = x + 25$$

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

Answer: 10 cm

Question 17

The area of a trapezium is 112.5 m^2 . Its parallel sides are 15 m and 30 m. Find the height.



Solution:

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

$$\text{Height} = (2 \times 112.5) \div (15 + 30)$$

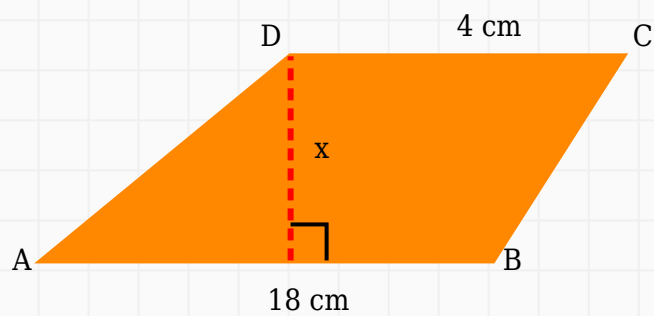
$$\text{Height} = 225 \div 45$$

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

Answer: 5 m

Question 18

The area of a trapezium is 110 cm^2 . Its parallel sides are 4 cm and 18 cm. Find the height.



Solution:

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

$$\text{Height} = (2 \times 110) \div (4 + 18)$$

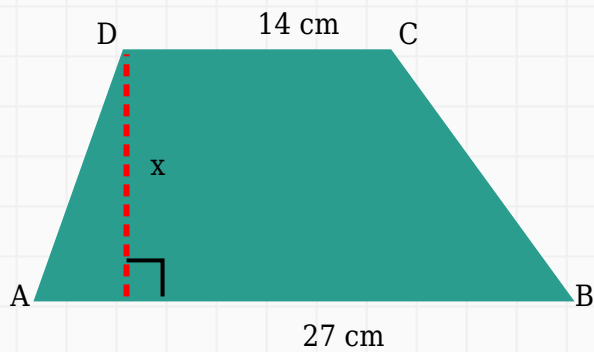
$$\text{Height} = 220 \div 22$$

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

Answer: 10 cm

Question 19

The area of a trapezium is 225.5 cm^2 . Its parallel sides are 14 cm and 27 cm. Find the height.



Solution:

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

$$\text{Height} = (2 \times 225.5) \div (14 + 27)$$

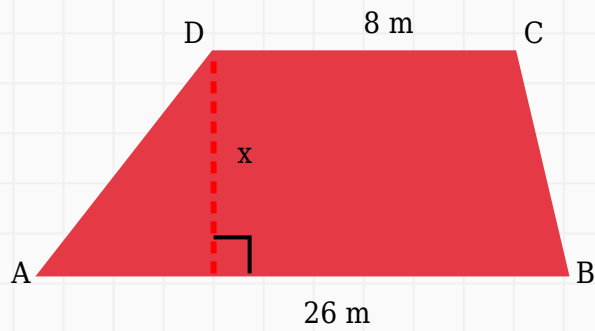
$$\text{Height} = 451 \div 41$$

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

Answer: 11 cm

Question 20

The area of a trapezium is 102 m^2 . Its parallel sides are 8 m and 26 m. Find the height.



Solution:

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

$$\text{Height} = (2 \times 102) \div (8 + 26)$$

$$\text{Height} = 204 \div 34$$

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

Answer: 6 m