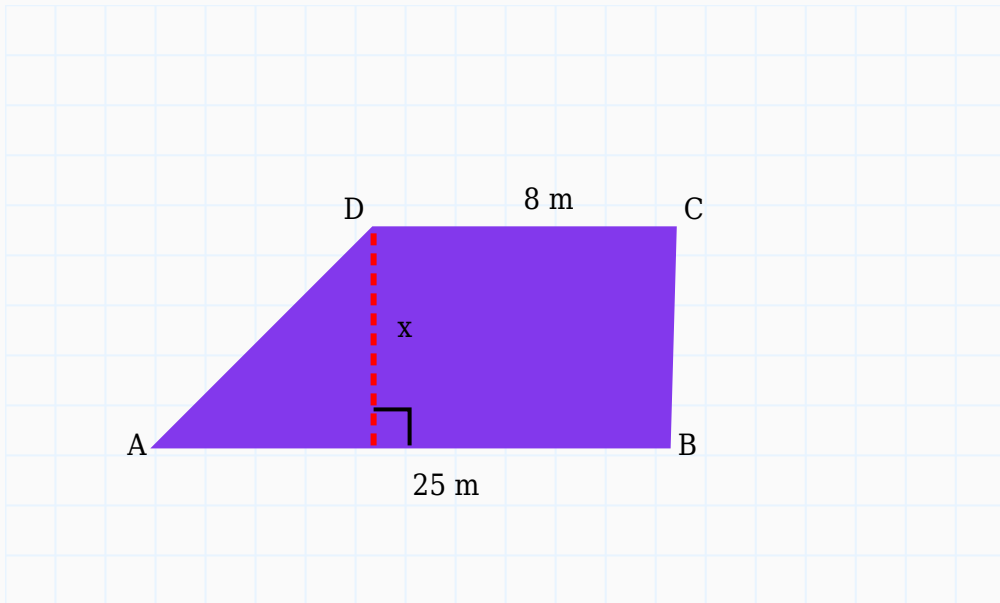


# Area of Trapezium Worksheet

## Question 1

The area of a trapezium is  $198 \text{ m}^2$ . Its parallel sides are  $8 \text{ m}$  and  $25 \text{ m}$ . Find the height.



**Solution:**

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

$$\text{Height} = (2 \times 198) \div (8 + 25)$$

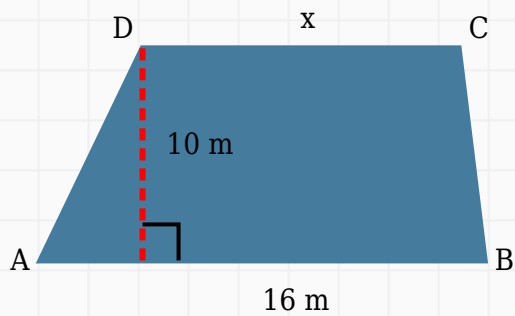
$$\text{Height} = 396 \div 33$$

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

**Answer:**  $12 \text{ m}$

## Question 2

The area of a trapezium is  $140 \text{ m}^2$ . One parallel side is  $16 \text{ m}$  and height is  $10 \text{ m}$ . Find the other parallel side.



**Solution:**

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

$$140 = 10 \times (x + 16) \div 2$$

$$280 = 10 \times (x + 16)$$

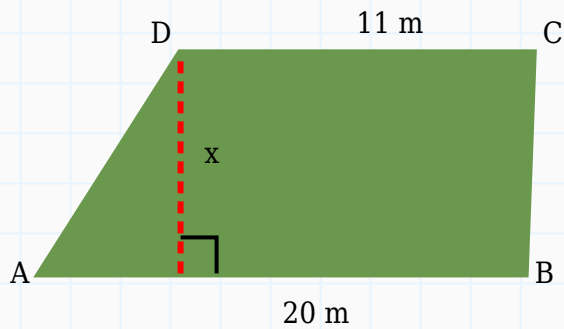
$$28 = x + 16$$

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

**Answer:** 12 m

### Question 3

The area of a trapezium is  $201.5 \text{ m}^2$ . Its parallel sides are 11 m and 20 m. Find the height.



**Solution:**

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

$$\text{Height} = (2 \times 201.5) \div (11 + 20)$$

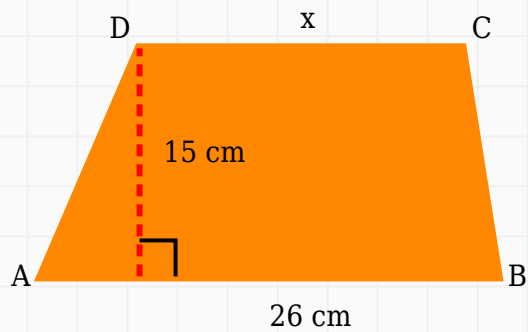
$$\text{Height} = 403 \div 31$$

$$\text{Height} = 13 \text{ m}$$

**Answer:** 13 m

#### Question 4

The area of a trapezium is  $255 \text{ cm}^2$ . One parallel side is 26 cm and height is 15 cm. Find the other parallel side.



**Solution:**

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

$$255 = 15 \times (x + 26) \div 2$$

$$510 = 15 \times (x + 26)$$

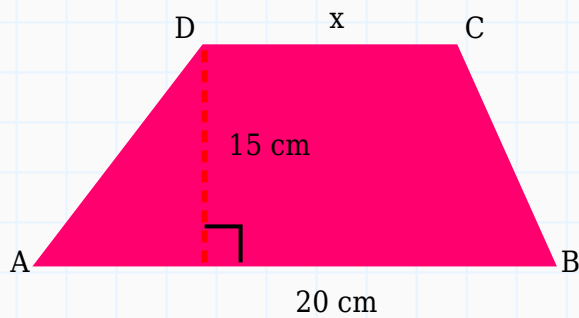
$$34 = x + 26$$

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

**Answer:** 8 cm

### Question 5

The area of a trapezium is  $247.5 \text{ cm}^2$ . One parallel side is 20 cm and height is 15 cm. Find the other parallel side.



**Solution:**

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

$$247.5 = 15 \times (x + 20) \div 2$$

$$495 = 15 \times (x + 20)$$

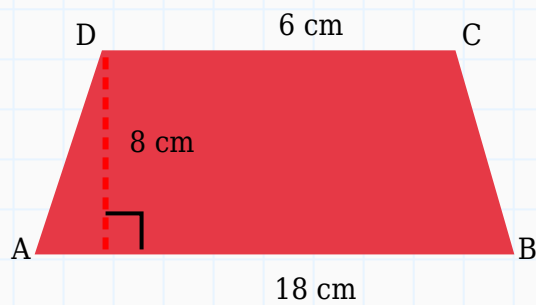
$$33 = x + 20$$

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

**Answer:** 13 cm

### Question 6

Find the area of the trapezium having parallel sides 6 cm and 18 cm with height 8 cm.



**Solution:**

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

$$\text{Area} = 8 \times (6 + 18) \div 2$$

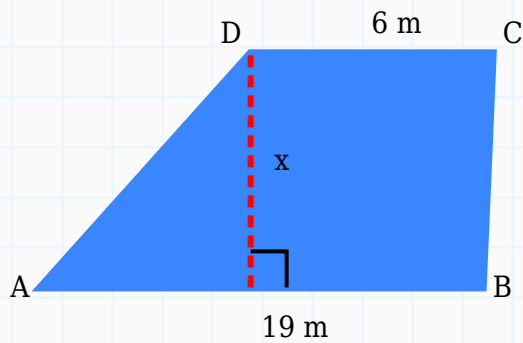
$$\text{Area} = 8 \times 24 \div 2$$

$$\text{Area} = 96 \text{ cm}^2$$

**Answer:**  $96 \text{ cm}^2$

### Question 7

The area of a trapezium is  $112.5 \text{ m}^2$ . Its parallel sides are 6 m and 19 m. Find the height.



**Solution:**

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

$$\text{Height} = (2 \times 112.5) \div (6 + 19)$$

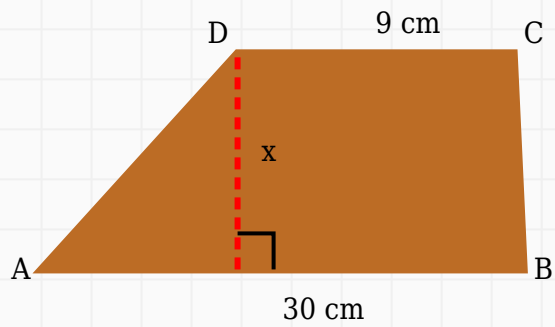
$$\text{Height} = 225 \div 25$$

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

**Answer:** 9 m

### Question 8

The area of a trapezium is  $253.5 \text{ cm}^2$ . Its parallel sides are 9 cm and 30 cm. Find the height.



**Solution:**

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

$$\text{Height} = (2 \times 253.5) \div (9 + 30)$$

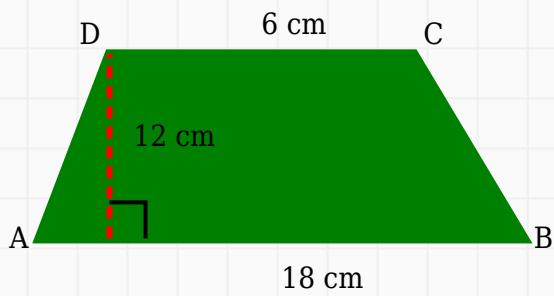
$$\text{Height} = 507 \div 39$$

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

**Answer:** 13 cm

### Question 9

Find the area of the trapezium having parallel sides 6 cm and 18 cm with height 12 cm.



**Solution:**

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

$$\text{Area} = 12 \times (6 + 18) \div 2$$

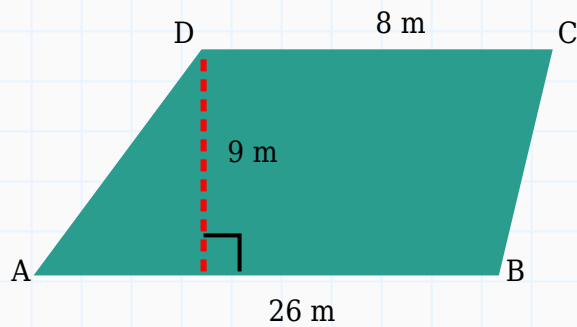
$$\text{Area} = 12 \times 24 \div 2$$

$$\text{Area} = 144 \text{ cm}^2$$

**Answer:** 144 cm<sup>2</sup>

### Question 10

Find the area of the trapezium having parallel sides 8 m and 26 m with height 9 m.



**Solution:**

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

$$\text{Area} = 9 \times (8 + 26) \div 2$$

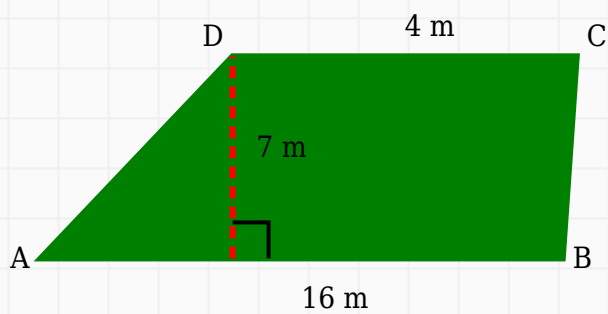
$$\text{Area} = 9 \times 34 \div 2$$

$$\text{Area} = 153 \text{ m}^2$$

**Answer:** 153 m<sup>2</sup>

### Question 11

Find the area of the trapezium having parallel sides 4 m and 16 m with height 7 m.



**Solution:**

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

$$\text{Area} = 7 \times (4 + 16) \div 2$$

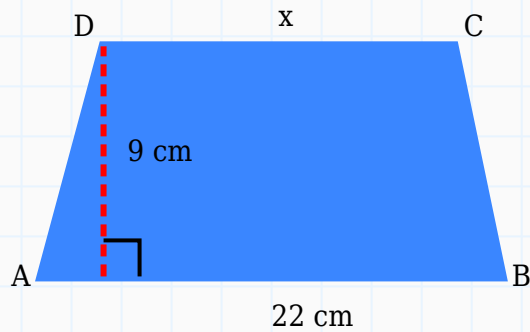
$$\text{Area} = 7 \times 20 \div 2$$

$$\text{Area} = 70 \text{ m}^2$$

**Answer:** 70 m<sup>2</sup>

### Question 12

The area of a trapezium is 153 cm<sup>2</sup>. One parallel side is 22 cm and height is 9 cm. Find the other parallel side.



**Solution:**

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

$$153 = 9 \times (x + 22) \div 2$$

$$306 = 9 \times (x + 22)$$

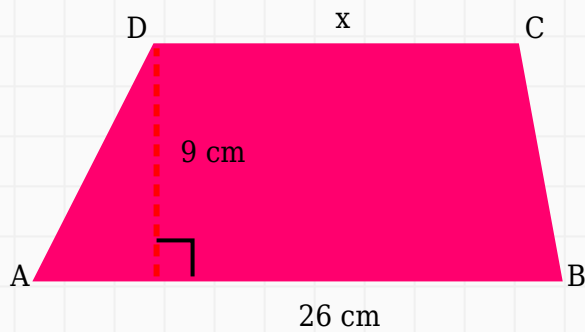
$$34 = x + 22$$

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

**Answer:** 12 cm

### Question 13

The area of a trapezium is  $166.5 \text{ cm}^2$ . One parallel side is 26 cm and height is 9 cm. Find the other parallel side.



**Solution:**

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

$$166.5 = 9 \times (x + 26) \div 2$$

$$333 = 9 \times (x + 26)$$

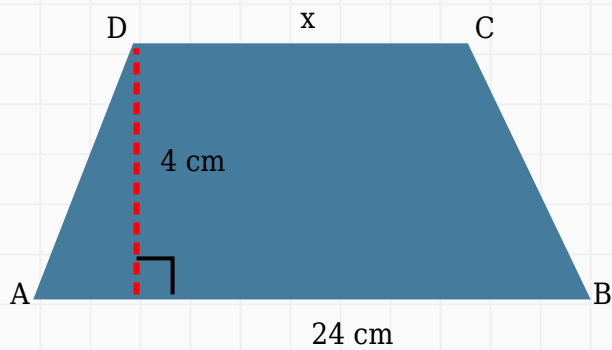
$$37 = x + 26$$

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

**Answer:** 11 cm

### Question 14

The area of a trapezium is  $76 \text{ cm}^2$ . One parallel side is 24 cm and height is 4 cm. Find the other parallel side.



**Solution:**

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

$$76 = 4 \times (x + 24) \div 2$$

$$152 = 4 \times (x + 24)$$

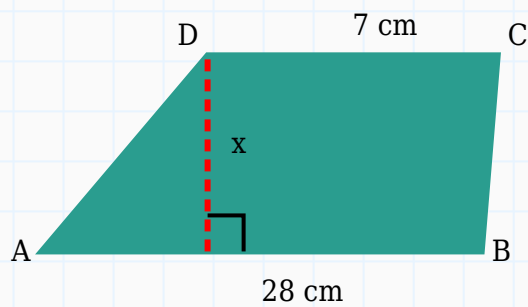
$$38 = x + 24$$

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

**Answer:** 14 cm

### Question 15

The area of a trapezium is  $192.5 \text{ cm}^2$ . Its parallel sides are 7 cm and 28 cm. Find the height.



**Solution:**

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

$$\text{Height} = (2 \times 192.5) \div (7 + 28)$$

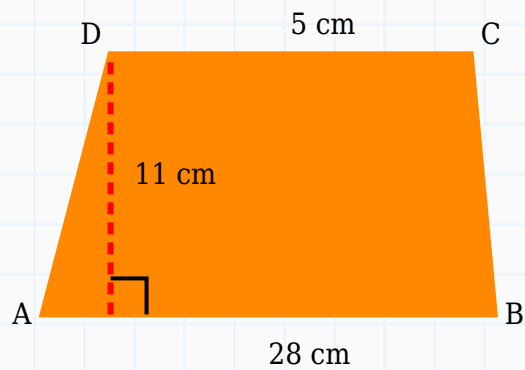
$$\text{Height} = 385 \div 35$$

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

**Answer:** 11 cm

### Question 16

Find the area of the trapezium having parallel sides 5 cm and 28 cm with height 11 cm.



**Solution:**

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

$$\text{Area} = 11 \times (5 + 28) \div 2$$

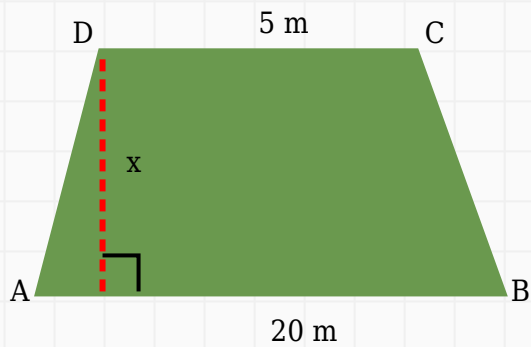
$$\text{Area} = 11 \times 33 \div 2$$

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

**Answer:**  $181.5 \text{ cm}^2$

### Question 17

The area of a trapezium is  $175 \text{ m}^2$ . Its parallel sides are 5 m and 20 m. Find the height.



**Solution:**

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

$$\text{Height} = (2 \times 175) \div (5 + 20)$$

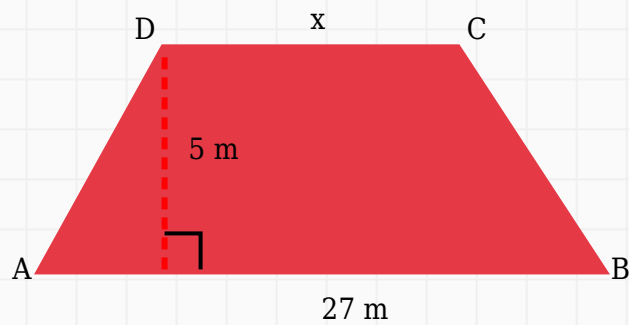
$$\text{Height} = 350 \div 25$$

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

**Answer:** 14 m

### Question 18

The area of a trapezium is  $100 \text{ m}^2$ . One parallel side is 27 m and height is 5 m. Find the other parallel side.



**Solution:**

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

$$100 = 5 \times (x + 27) \div 2$$

$$200 = 5 \times (x + 27)$$

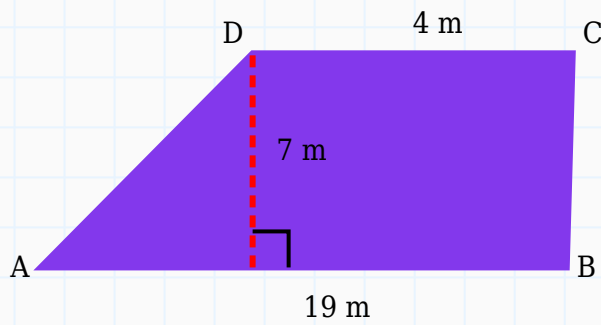
$$40 = x + 27$$

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

**Answer:** 13 m

### Question 19

Find the area of the trapezium having parallel sides 4 m and 19 m with height 7 m.



**Solution:**

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

$$\text{Area} = 7 \times (4 + 19) \div 2$$

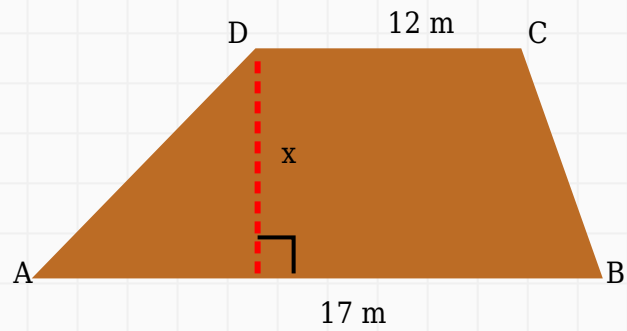
$$\text{Area} = 7 \times 23 \div 2$$

$$\text{Area} = 80.5 \text{ m}^2$$

**Answer:**  $80.5 \text{ m}^2$

### Question 20

The area of a trapezium is  $101.5 \text{ m}^2$ . Its parallel sides are 12 m and 17 m. Find the height.



**Solution:**

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

$$\text{Height} = (2 \times 101.5) \div (12 + 17)$$

$$\text{Height} = 203 \div 29$$

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

**Answer:** 7 m