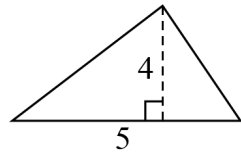
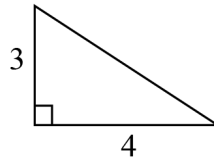


Area of Triangles

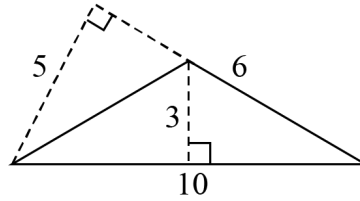
- 1 Find the areas of the triangles below.



Area: _____

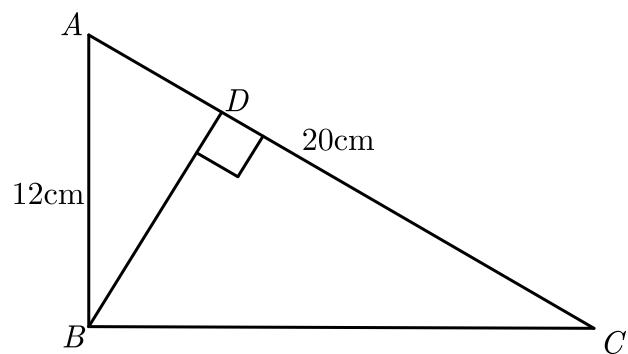


Area: _____



Area: _____

- 2 Triangle ABC has area 96cm^2 . The angle at B is 90° . Side AC has length 20cm , and AB has length 12cm .



- (1) What is the length of side BC ?

Answer: _____ cm

- (2) What is the length of the line BD ?

Answer: _____ cm

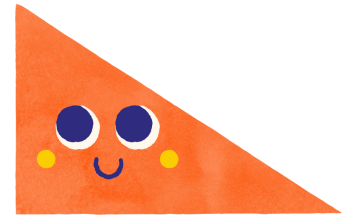
- 3 A piece of stained glass in the shape of a right triangle has sides measuring 8 cm, 15 cm, and 17 cm. What is the area of the piece?

A. 120 cm^2

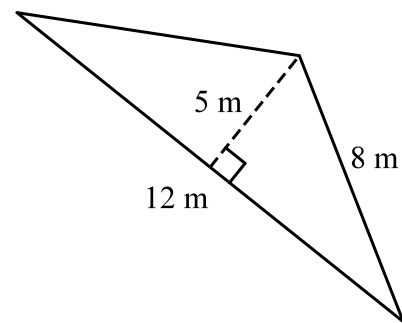
B. 75 cm^2

C. 68 cm^2

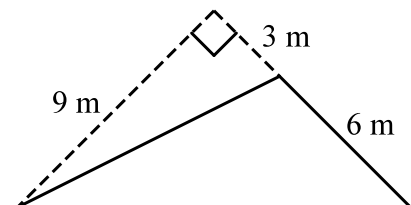
D. 60 cm^2



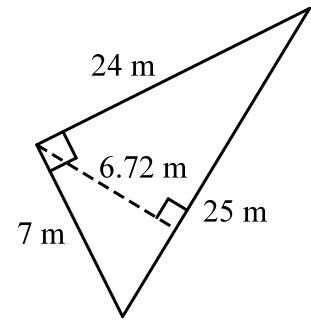
- 4 For the figure below, the area of the triangle is _____ m^2 .



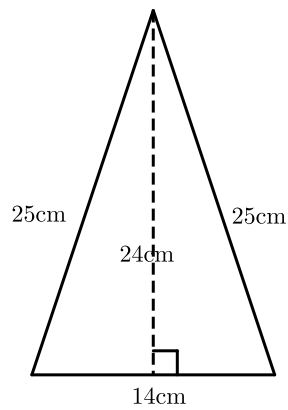
- 5 The area of the triangle below is _____ m^2 .



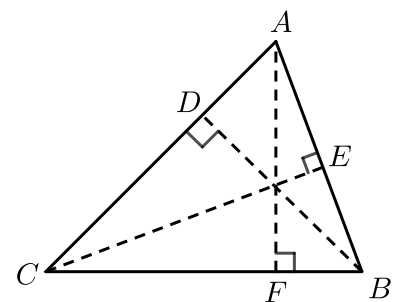
6 The area of the triangle below is _____ m^2 .



7 Find the area of triangle in the figure below.



8 In triangle ABC , if AC is the base, which of the following is the height?



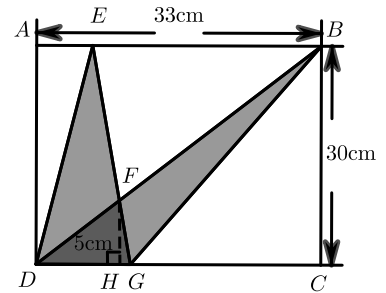
A. AF

B. BD

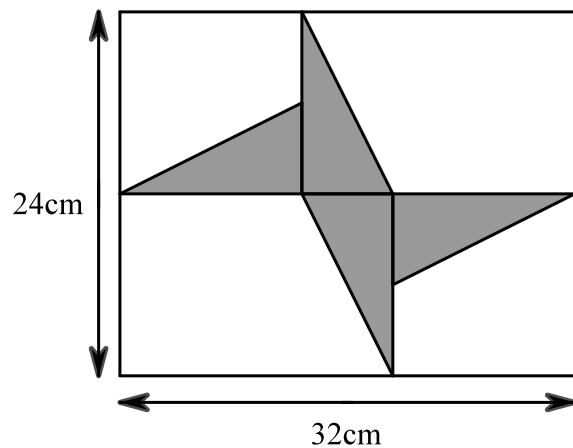
C. CD

D. CE

- 9 $ABCD$ is a rectangle measuring 33cm by 30cm . The length of FH is 5cm . Given that the length of DG is $\frac{1}{2}$ of GC , find the shaded area. _____



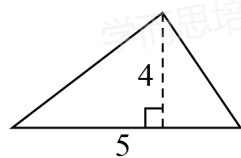
- 10 The diagram shows four identical triangles inside a rectangle.
What is the area of one of the triangles? ()



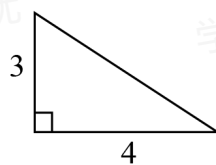
- A. 20 cm^2 B. 36 cm^2 C. 48 cm^2 D. 32 cm^2 E. 60 cm^2

Area of Triangles

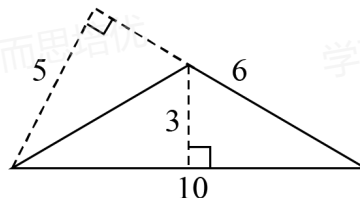
1 Find the areas of the triangles below.



Area: _____



Area: _____



Area: _____

Answer 1:10

2:6

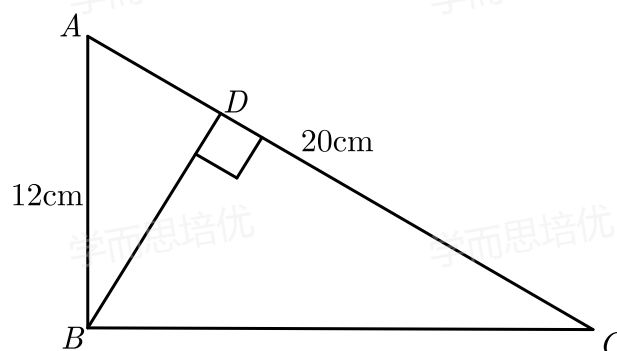
3:15

Solution $4 \times 5 \div 2 = 10$

$3 \times 4 \div 2 = 6$

$3 \times 10 \div 2 = 15$ or $6 \times 5 \div 2 = 15$

2 Triangle ABC has area 96cm^2 . The angle at B is 90° . Side AC has length 20cm , and AB has length 12cm .



(1) What is the length of side BC ?

Answer: _____ cm

(2) What is the length of the line BD ?

Answer: _____ cm

Answer (1) 16

(2) 9.6

Solution (1) Revise from (UK Warwick School question #31)

(2) N/A.

- 3 A piece of stained glass in the shape of a right triangle has sides measuring 8 cm, 15 cm, and 17 cm. What is the area of the piece?

A. 120 cm²

B. 75 cm²

C. 68 cm²

D. 60 cm²



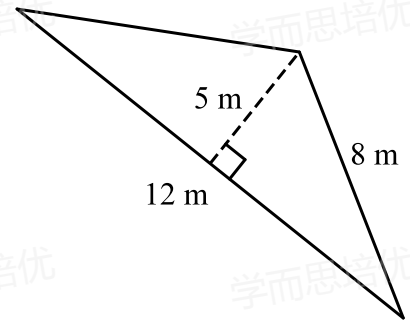
Answer D

Solution In this case, we need to identify the base and height from the given sides. The sides of the triangle are 8 cm, 15 cm, and 17 cm, with 17 cm being the hypotenuse since it is the longest side.

For a right triangle, the two shorter sides (8 cm and 15 cm) are the base and height.

$$\text{Area: } 8 \times 15 \div 2 = 60 \text{ cm}^2$$

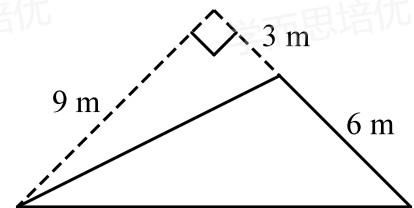
- 4 For the figure below, the area of the triangle is _____ m².



Answer 30

Solution $12 \times 5 \div 2 = 30 \text{ m}^2$

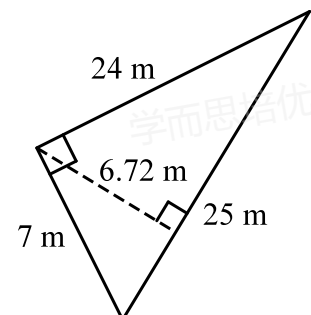
5 The area of the triangle below is _____ m^2 .



Answer 27

Solution $6 \times 9 \div 2 = 27 \text{ m}^2$

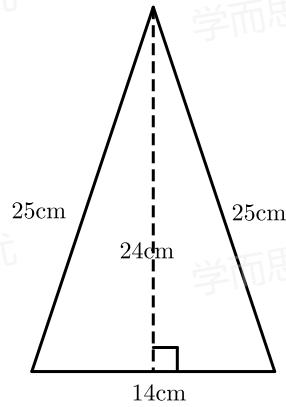
6 The area of the triangle below is _____ m^2 .



Answer 84

Solution $7 \times 24 \div 2 = 84$ or $25 \times 6.72 \div 2 = 84$

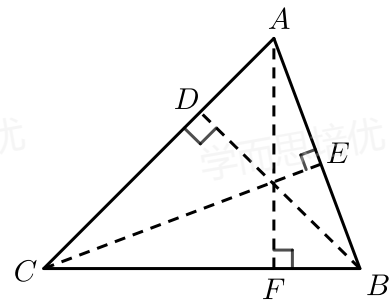
7 Find the area of triangle in the figure below.



Answer 168cm^2

Solution Triangle A: $14 \times 24 \div 2 = 168\text{cm}^2$

8 In triangle ABC , if AC is the base, which of the following is the height?



A. AF

B. BD

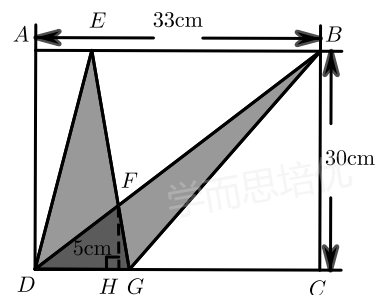
C. CD

D. CE

Answer B

Solution The base is perpendicular to the height. So the answer is B.

- 9 $ABCD$ is a rectangle measuring 33cm by 30cm . The length of FH is 5cm . Given that the length of DG is $\frac{1}{2}$ of GC , find the shaded area. _____



Answer 302.5cm^2 .

Solution $1u + 2u = 3u$ (total units),

$$3u \rightarrow 33,$$

$$1u \rightarrow 33 \div 3 = 11(DG),$$

$$2u \rightarrow 11 \times 2 = 22(GC),$$

$$A \rightarrow \frac{1}{2} \times 11 \times 30 = 165 \text{ (including c),}$$

$$B \rightarrow \frac{1}{2} \times 11 \times 30 = 165 \text{ (including c),}$$

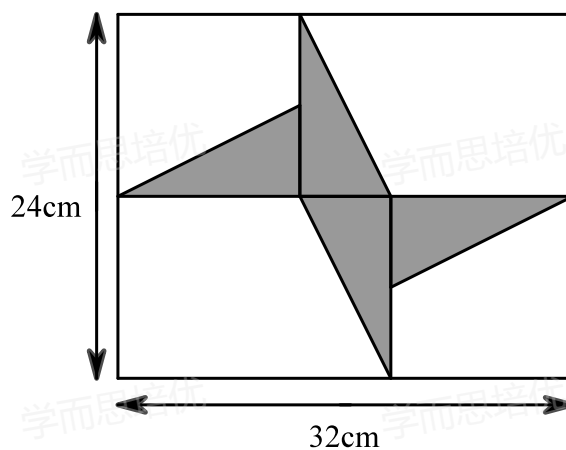
$$C \rightarrow \frac{1}{2} \times 11 \times 5 = 27.5,$$

$$165 + 165 = 330(A + B),$$

$$330 - 27.5 = 302.5 \text{ (total shaded).}$$

- 10 The diagram shows four identical triangles inside a rectangle.

What is the area of one of the triangles? ()



A. 20 cm^2

B. 36 cm^2

C. 48 cm^2

D. 32 cm^2

E. 60 cm^2

Answer C

Solution (UK Royal Grammar Guildford 11+ Maths Sample Question #12)