

Pythagoras' theorem: finding a shorter side

Grade 5 | Foundation and Higher | 9 questions, 27 marks

GCSE Maths topic practice



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Name: _____ **Date:** _____ **Score:** _____ / 27

- 1** Triangle DEF is a right-angled triangle with the right angle at E.
The hypotenuse DF = 20 cm and DE = 8 cm.
Work out the length of EF.
Give your answer correct to 1 decimal place.

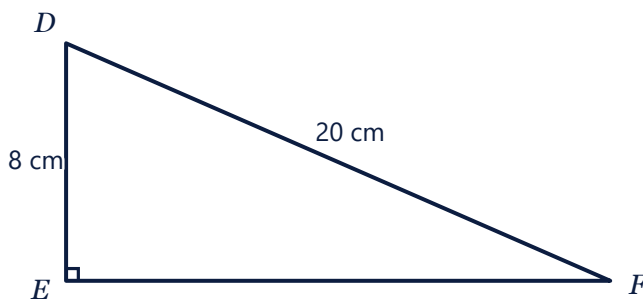


Diagram NOT accurately drawn

(2 marks)

Answer _____

- 2** Triangle PQR has a right angle at Q. $PR = 17$ cm and $PQ = 8$ cm.
Work out the length of QR.

(2 marks)

Answer _____

- 3** A rectangular screen has a diagonal of 15 inches and a width of 9 inches.
Work out the height of the screen.

(3 marks)

Answer _____

- 4 A kite is flying on a straight string that is 45 m long. The kite is 28 m horizontally from the person holding the other end of the string. The person holds the string at ground level. Work out the height of the kite above the ground. Give your answer correct to 1 decimal place.

(3 marks)

Answer _____

- 5 A straight wheelchair ramp is 3.4 m long. It starts 3.2 m horizontally from the base of a platform and reaches the top of the platform. Work out the height of the platform. Give your answer in metres, correct to 2 decimal places.

(3 marks)

Answer _____

- 6 Triangle ABC has a right angle at B . $AC = 9$ cm and $AB = 6$ cm. Work out the length of BC . Give your answer as a surd in its simplest form.

(3 marks)

Answer _____

- 7 An isosceles triangle has two equal sides of length 9 cm and a base of length 10 cm.
- Work out the perpendicular height of the triangle. Give your answer correct to 1 decimal place.
 - Work out the area of the triangle. Give your answer correct to 1 decimal place.

(4 marks)

Answer _____

8 A ladder is 6.5 m long.

The ladder leans against a vertical wall, with the foot of the ladder on horizontal ground 2.5 m from the base of the wall.

Work out how far up the wall the top of the ladder reaches.

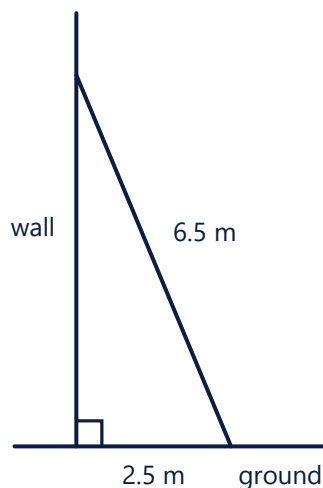


Diagram NOT accurately drawn

(3 marks)

Answer _____

9 $ABCD$ is a trapezium. AB is parallel to DC . The angles at A and D are both 90° .

$AB = 9$ cm, $DC = 14$ cm and $BC = 13$ cm.

Work out the area of the trapezium.

(4 marks)

Answer _____

End of questions | Total 27 marks