Multiple choice questions - Pythagoras' theorem

Year: Year 9 · 10

Question 1 The hypotenuse of a right-angled triangle is:

- ◯ **A.** the shortest side
- ◯ **B.** the side opposite the right angle
- ◯ **C.** the side next to the right angle
- ◯ **D.** any side

Question 2 Legs 3 cm and 4 cm. The hypotenuse is:

- ◯ **A.** 5 cm
- ◯ **B.** 7 cm
- ◯ **C.** 25 cm
- ◯ **D.** 12 cm

Question 3 Hypotenuse 17 cm, one leg 8 cm. The other leg is:

- ◯ **A.** 9 cm
- ◯ **B.** 15 cm
- ◯ **C.** 25 cm
- ◯ **D.** 12 cm

Question 4 Which is a Pythagorean triple?

- ◯ **A.** 4, 5, 6
- ◯ **B.** 5, 12, 13
- ◯ **C.** 6, 7, 8
- ◯ **D.** 2, 3, 4

Question 5 Legs 1 cm and 1 cm. The hypotenuse is:

- ◯ **A.** 2 cm
- ◯ **B.** 1 cm
- ◯ **C.** √2 cm
- ◯ **D.** 0.5 cm

Question 6 To find a shorter side you should:

- ◯ **A.** add the squares
- ◯ **B.** subtract the squares
- ◯ **C.** multiply the sides

◯ **D.** divide the sides

Question 7 A triangle with sides 5, 6, 8 is:

◯ **A.** right-angled
◯ **B.** not right-angled
◯ **C.** equilateral
◯ **D.** impossible

Question 8 The diagonal of a 9 cm by 12 cm rectangle is:

◯ **A.** 21 cm
◯ **B.** 15 cm
◯ **C.** 225 cm
◯ **D.** 108 cm

Question 9 The distance between (0,0) and (6,8) is:

◯ **A.** 14
◯ **B.** 10
◯ **C.** 100
◯ **D.** 2

Question 10 √50 to 3 significant figures is:

◯ **A.** 7.07
◯ **B.** 7.00
◯ **C.** 25.0
◯ **D.** 7.10

Answer grid - Pythagoras' theorem

Year: Year 9

Question	Answer	Explanation
1	**B**	It is opposite the 90° angle and is the longest side.
2	**A**	9 + 16 = 25.
3	**B**	289 - 64 = 225.
4	**B**	25 + 144 = 169.
5	**C**	1 + 1 = 2.
6	**B**	$a^2 = c^2 - b^2$.
7	**B**	25 + 36 = 61, not 64.
8	**B**	81 + 144 = 225.
9	**B**	36 + 64 = 100.
10	**A**	$\sqrt{50} = 7.0710...$