Multiple choice questions - Pythagoras and trigonometry in right-angled triangles

Year: Year 11 · 10

Question 1 The hypotenuse is

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

Question 2 Sides 9 and 12. The hypotenuse is

- ◯ **A.** 15
- ◯ **B.** 21
- ◯ **C.** $\sqrt{63}$
- ◯ **D.** 108

Question 3 The hypotenuse is 10 and one side is 6. The other side is

- ◯ **A.** 4
- ◯ **B.** 8
- ◯ **C.** $\sqrt{136}$
- ◯ **D.** 16

Question 4 SOH means

- ◯ **A.** $\sin = \frac{O}{H}$
- ◯ **B.** $\sin = \frac{O}{A}$
- ◯ **C.** $\sin = \frac{A}{H}$
- ◯ **D.** $\sin = \frac{H}{O}$

Question 5 Which ratio uses opposite and adjacent?

- ◯ **A.** sine
- ◯ **B.** cosine
- ◯ **C.** tangent
- ◯ **D.** none

Question 6 $\sin 30^\circ$ equals

- ◯ **A.** $\frac{\sqrt{3}}{2}$
- ◯ **B.** $\frac{1}{2}$
- ◯ **C.** 1
- ◯ **D.** $\frac{1}{\sqrt{3}}$

Question 7 $\tan 45^\circ$ equals

- ◯ **A.** 0
- ◯ **B.** $\frac{1}{2}$
- ◯ **C.** 1
- ◯ **D.** $\sqrt{3}$

Question 8 Which are the sides of a right-angled triangle?

- ◯ **A.** 5, 6, 7
- ◯ **B.** 6, 8, 10
- ◯ **C.** 4, 5, 8
- ◯ **D.** 7, 8, 9

Question 9 (Higher) A cuboid is 3 by 4 by 12. The space diagonal is

- ◯ **A.** 13
- ◯ **B.** 19
- ◯ **C.** $\sqrt{19}$
- ◯ **D.** 5

Question 10 The angle of elevation is measured from

- ◯ **A.** the vertical
- ◯ **B.** the horizontal, upwards
- ◯ **C.** the ground downwards
- ◯ **D.** north

Answer grid - Pythagoras and trigonometry in right-angled triangles

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Question	Answer	Explanation
1	**B**	Longest side, opposite 90 degrees.
2	**A**	81+144=225.
3	**B**	100-36=64.
4	**A**	Sine is opposite over hypotenuse.
5	**C**	TOA.
6	**B**	Exact value.
7	**C**	Exact value.
8	**B**	36+64=100.
9	**A**	sqrt(9+16+144)=13.
10	**B**	Up from horizontal.