PEP Grade 8 Math — Unit 17: Pythagorean Theorem • Unit Test (Basic)

PEP · Grade 8 · Term 2 · Mathematics · Unit Test · Basic

AI-generated practice paper · original study aid, not an official examination paper · 40 questions · 100 points

Name: _____ Date: _____ Score: _____

Answer all questions. This paper is worth 100 points. Show your working where appropriate.

I. Multiple Choice

1. In a right triangle, if one leg is 6 cm and the other leg is 8 cm, what is the length of the hypotenuse?
   A. 9 cm
   B. 10 cm
   C. 11 cm
   D. 12 cm

2. Which of the following sets of side lengths can form a right triangle?
   A. 5, 7, 9
   B. 6, 8, 10
   C. 7, 8, 10
   D. 4, 5, 7

3. If the hypotenuse of a right triangle is 13 cm and one leg is 5 cm, what is the length of the other leg?
   A. 10 cm
   B. 11 cm
   C. 12 cm
   D. 14 cm

4. Which statement correctly describes the Pythagorean theorem?
   A. The sum of the legs equals the hypotenuse.
   B. The square of the hypotenuse equals the sum of the squares of the legs.
   C. The hypotenuse is always twice a leg.
   D. The area of the triangle equals the product of the two legs.

5. A ladder leans against a wall, reaching 12 feet up the wall. If the base of the ladder is 5 feet from the wall, how long is the ladder?
   A. 13 ft
   B. 14 ft
   C. 15 ft
   D. 16 ft

6. Which of the following triangles has sides that satisfy the Pythagorean theorem?
   A. 7, 10, 12
   B. 9, 12, 15
   C. 8, 9, 11
   D. 6, 7, 10

7. A right triangle has legs measuring 3 cm and 4 cm. What is the perimeter of the triangle?
   A. 10 cm
   B. 11 cm
   C. 12 cm
   D. 13 cm

8. Which of these could NOT be the side lengths of a right triangle?
   A. 3, 4, 5
   B. 5, 12, 13
   C. 6, 8, 10
   D. 4, 5, 8

9. If a right triangle has a hypotenuse of 25 cm and one leg of 15 cm, what is the other leg?