PEP Grade 9 Math — Unit 28: Trigonometric Ratios of Acute Angles · Unit Test (Basic)

PEP · Grade 9 · 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 acute angle is 30[[deg:]], what is the ratio of the opposite side to the hypotenuse?
   A. 1/2
   B. 1/3
   C. 1/sqrt:3
   D. sqrt:3/2

2. Which trigonometric ratio represents adjacent over hypotenuse in a right triangle?
   A. sine
   B. cosine
   C. tangent
   D. cotangent

3. If sin(A) = 3/5, what is cos(A) for acute angle A?
   A. 4/5
   B. 5/4
   C. 3/4
   D. 4/3

4. In a right triangle with legs 6 cm and 8 cm, what is the length of the hypotenuse?
   A. 9 cm
   B. 10 cm
   C. 11 cm
   D. 12 cm

5. What is tan(45[[deg:]])?
   A. 0
   B. 1/2
   C. 1
   D. $\sqrt{(2)}$

6. Which expression is equivalent to sin(60[[deg:]])?
   A. 1/2
   B. sqrt:3/2
   C. 1/sqrt:3
   D. 2/sqrt:3

7. Given a right triangle with hypotenuse 13 and adjacent side 12, what is sin(angle)?
   A. 5/13
   B. 12/13
   C. 5/12
   D. 12/5

8. If cos(theta) = 4/5, what is the value of tan(theta) for acute theta?
   A. 3/4
   B. 4/3
   C. 5/4
   D. 3/5

9. Which angle has a tangent equal to 1/sqrt:3?
   A. 30[[deg:]]
   B. 45[[deg:]]
   C. 60[[deg:]]
   D. 75[[deg:]]

10. In a right triangle, if the opposite side is 5 and the hypotenuse is 13, what is the measure of the angle?