

Trigonometry Readiness Self Test

Use this test to see if your algebra background is sufficient for Math 105: Trigonometry.

The test covers material from high school Algebra I and II (or College Algebra) and some basic facts from Geometry.

Suggested use: Maximum time allowed is 30 minutes. Do not use a calculator. Do not refer to a textbook. A score of at least 6 correct would suggest sufficient preparation for Trigonometry.

Problems you get wrong should at least look familiar and you should be able to see how to do such problems by referring to a textbook.

1. What is the total number of degrees in the three angles of a triangle?
2. If the two legs of a right triangle have lengths of 2 and 5, what is the length of the hypotenuse?
3. Is the quantity $\frac{1}{\sqrt{2}}$ greater than, less than, or equal to $\frac{\sqrt{2}}{2}$?
4. Solve the equation $t + st = u$ for t .
5. Determine the area of a circle with radius 2.
6. Factor the numerator and simplify $\frac{x^2 - 1}{x - 1}$.
7. Solve for x : $3x + 4 = 6x - 2$.
8. Solve by factoring: $2x^2 - x - 3 = 0$.
9. Solve using the quadratic formula: $2x^2 - x - 4 = 0$.
10. Graph $x^2 + y^2 = 1$.
11. If $\frac{x}{12} = \frac{5}{3}$, then what is the value of x ?
12. Determine the distance between the points $(-1, 3)$ and $(2, 5)$.

Solutions

1. 180°

2. $\sqrt{29}$

3. They are equal.

4. $t = \frac{u}{1+s}$

5. 4π

6. $x + 1$

7. $x = 2$

8. $x = \frac{3}{2}, -1$

9. $x = \frac{1 \pm \sqrt{33}}{4}$

10. The graph is a circle of radius 1 with center at the point $(0, 0)$.

11. $x = 20$

12. $\sqrt{13}$