

# Trig Chapter 1 Practice Test 1

Name: \_\_\_\_\_

Time Start: \_\_\_\_\_ Finish: \_\_\_\_\_

Total Time = \_\_\_\_\_

**Solve each equation.**

1.  $2(3n - 1) - (3n - 1) = 2(2n + 5)$

2.  $5(3n - 2) = 6(2n + 5)$

3.  $5(x - 2) - (3x - 7) = 6(-2x + 4)$

4.  $5(7x - 12) + 2(3x + 5) = 7x - 6$

**Simplify each expression or radical**

\_\_\_\_\_ 5.  $(3n^5)^2$

\_\_\_\_\_ 14.  $(3x^5)(4x^7)$

\_\_\_\_\_ 6.  $n^5 \cdot n^3$

\_\_\_\_\_ 15.  $(2a^2b^3)^2$

\_\_\_\_\_ 7.  $(n^2)^4$

\_\_\_\_\_ 16.  $(2abc)(-3abc)$

\_\_\_\_\_ 8.  $2n^3y^2 + 4n^3y + 5n^3y^2 + 6n^3y$

\_\_\_\_\_ 17.  $a^2 \cdot a^4$

\_\_\_\_\_ 9.  $(2y^4)(3y^4)$

\_\_\_\_\_ 18.  $(3ab^2)(3ab)$

\_\_\_\_\_ 10.  $(x + 2)(x - 7)$

\_\_\_\_\_ 19.  $(-4a^4b^{10})(-2a^4b^3)$

\_\_\_\_\_ 11.  $(2x + 3)^2$

\_\_\_\_\_ 20.  $(2a^4b^3c^2)^3$

\_\_\_\_\_ 12.  $(2x^2 + 5x)(5x^2 - 2x - 1)$

\_\_\_\_\_ 21.  $(ab^3)(4a^2b^2)$

\_\_\_\_\_ 13.  $(3n^3y^5)^2 + 2n(n^5)y^{10}$

\_\_\_\_\_ 22.  $2x \cdot 3x \cdot 2x^2 \cdot 3x$

\_\_\_\_\_ 23.  $\sqrt{-40}$

\_\_\_\_\_ 34.  $\frac{9 \pm \sqrt{45}}{6}$

\_\_\_\_\_ 24.  $\sqrt{a^3 b^6}$

\_\_\_\_\_ 35.  $\frac{n^6}{y^{10}} \cdot \frac{y^{12}}{n^5}$

\_\_\_\_\_ 25.  $\sqrt{-80a^2}$

\_\_\_\_\_ 36.  $n^{-3} \cdot y^5 \cdot n^{-2} \cdot y^{-3}$

\_\_\_\_\_ 26.  $\sqrt{128}$

\_\_\_\_\_ 37.  $\frac{c^3 w^{-5} h^{-1}}{c^{-1} w^{-2} h}$

\_\_\_\_\_ 27.  $\sqrt{-600}$

\_\_\_\_\_ 38.  $\left(\frac{a^{-2} b^2}{ab^{-4} c}\right)^{-2}$

\_\_\_\_\_ 28.  $\sqrt[3]{a^9 b^6}$

\_\_\_\_\_ 39.  $\left(\frac{2}{5}\right)^{-2}$

\_\_\_\_\_ 29.  $\sqrt[3]{16x^4 y^8}$

\_\_\_\_\_ 40.  $(3a^{-5})^2$

\_\_\_\_\_ 30.  $\sqrt[5]{x^6 y^{12}}$

\_\_\_\_\_ 41.  $(2s^{-3} t^2 u^{-1} d)^{-3}$

\_\_\_\_\_ 31.  $\sqrt[4]{12960}$

\_\_\_\_\_ 42.  $\frac{y^3 e^{-5} s^3}{y^7 e^2 s^{-4}}$

\_\_\_\_\_ 32.  $\frac{8 \pm \sqrt{-8}}{2}$

\_\_\_\_\_ 43.  $\frac{-8ny}{10ny^3}$

\_\_\_\_\_ 33.  $\frac{6 \pm \sqrt{-27}}{3}$

\_\_\_\_\_ 44.  $\frac{20 \pm \sqrt{75}}{15}$

\_\_\_\_\_ 45. Starting with a blue light, a strand of colored lights contains lights in a repeating pattern of blue, orange, green, purple, red, and yellow. What is the color of the 143<sup>rd</sup> light?  
A. Blue                      B. Orange                      C. Green                      D. Purple                      E. Red

\_\_\_\_\_ 46. If  $2^{k+m} = 128$  and  $3^m = 27$ , then what is the value of  $2^k$ ?