

Name: _____

Date: _____

Algebra & Trigonometry Quiz
Chapter R.2

Trip-Wire Diagnostics

Simplify.

2. $\left(-\frac{4}{3}\right)^0$

8. $n^9 \cdot n^{-9}$

12. $3^6 \cdot 3^{-5} \cdot 3^4$

Core Questions:

Simplify.

20. $(8ab^7)(-7a^{-5}b^2)$

30. $\frac{x^3y^{-3}}{x^{-1}y^2}$

40. $(4n^{-1})^2(2n^3)^3$

44. $\left(\frac{125p^{12}q^{-14}r^{22}}{25p^8q^6r^{-15}}\right)^{-4}$

Convert to scientific notation.

46. 1,670,000

48. 0.00092

Convert to decimal notation.

56. 4.1×10^6

58. 3.15×10^{-6}

Compute. Write the answer using scientific notation.

68. $(6.4 \times 10^{12})(3.7 \times 10^{-5})$

70. $\frac{1.1 \times 10^{-40}}{2.0 \times 10^{-71}}$

Competitive Problem:

79. *Nuclear Disintegration.* One gram of radium produces 37 billion disintegrations per second. How many disintegrations are produced in 1 hr?