Pre-Algebra   Name_____

EE Unit 1 Review Homework

Date_____ Period_____

I can multiply expressions with exponents.

Simplify. Your answer should contain only positive exponents.

1) $3b^2 \cdot 6b^3$

2) $5a \cdot 4a^2 \cdot a$

3) $n^3 \cdot 6n$

I can divide expressions with exponents.

Simplify. Your answer should contain only positive exponents.

4) $\dfrac{8yx^5}{7x^4y^0}$

5) $\dfrac{9x^4y^4}{6x^3y^4}$

6) $\dfrac{3x^2y^4}{7x^2y^3}$

I can simplify expressions with negative exponents.

Simplify. Your answer should contain only positive exponents.

7) $6x^{-3}y^4$

8) $8yx^{-1}$

9) $3u^{-2}v^3$

I can evaluate square roots and cube roots.

Find each square root.

10) $\sqrt{81}$

Find each square root. Round to the nearest whole number.

11) $-\sqrt{36}$

A) -6 B) 18
C) -5 D) 36

12) Determine the cubed root of the following.

$\sqrt[3]{125}$

I can express numbers in scientific notation and standard notation.

Write each number in standard notation.

13) 2×10^5

    A) 20000   B) 200
    C) 200000   D) 2000

Write each number in scientific notation.

14) 0.00000003

15) The planet Mars has an average distance from the sun of about 311,600,000 miles. Write this number is scientific notation.

I can multiply numbers in scientific notation.

Simplify. Write each answer in scientific notation.

16) $\left(9.9 \times 10^0\right)\left(6.9 \times 10^{-5}\right)$

17) $\left(3 \times 10^2\right)\left(7.5 \times 10^{-3}\right)$

18) $\left(4 \times 10^{-3}\right)\left(4 \times 10^{-5}\right)$

I can divide numbers in scientific notation.

Simplfy. Write each answer in scientific notation.

19) $\dfrac{3.75 \cdot 10^0}{5 \cdot 10^4}$

20) $\dfrac{8 \cdot 10^{-5}}{4 \cdot 10^0}$

21) $\dfrac{1.5 \cdot 10^{-1}}{7 \cdot 10^1}$