CHAPTER 10

FINAL REVIEW

Review

1) $a^3 \bullet a^2$

2) $b^7 \bullet b^9$

3) $3^4 \bullet 3^5$

4) $\left(\frac{5}{7}\right) \bullet \left(\frac{5}{7}\right)^4$

5) $m \bullet m^2 \bullet m^3$

The Product of Powers Property:

To multiply powers with the same base _____

_____.

...with coefficients

6) $(7n^6)(3n^5)$

7) $(-6x^2y^4)(4x^5y)$

Let' see...

8) $(8^2)^3$

9) $\left[\left(\frac{4}{5}\right)^2\right]^4$

10) $(k^3)^4$

11) $\left[(-8)^4\right]^6$

The Power of Powers Property:

To find a power of a power _____ .

Let' see...

12) $(4d^5)^3$

13) $(-2x^4y^2)^3$

14) $(-5m^3)^2$

The Power of Products Property:

_____

_____ .

The Quotient of Powers Property:

_____base & _____ the exponents.

15) $\dfrac{n^{24}}{n^{16}}$

16) $\dfrac{1}{x^{5}} \bullet x^{8}$

17) $\dfrac{1}{(-7)^{4}} \bullet (-7)^{11}$

18) $\dfrac{x^{3}y}{x^{2}}$

RULES:

- ANY number to the zero power equals _____.
- a^{-n} is the _____ of a^{n}.

Evaluate

19) 5^{-2}

20) 75^{0}

21) $(-56)^{0}$

22) 4^{-3}

23) $\dfrac{1}{3^{-4}}$

24) $(-3)^{-3}$

Practice

Simplify

25) $3f^{-4}$

26) $(3f)^{-4}$

27) $\dfrac{a^{-7}}{b^{4}}$

28) $\dfrac{m^{6}}{n^{-7}}$

Practice

Simplify

29) $\dfrac{c^{-2}}{d^{-3}}$

30) $6x^{-2}yz^{-4}$

Scientific Notation

Write the following in standard form:

1) 2.5×10^{3}

2) 3.94×10^{-4}

Write the following in scientific notation:

3) $64,830,000,000,000$

4) 0.00000000089

Practice

1) $\left(17\times10^{12}\right)+\left(255\times10^{12}\right)$

2) $\left(8.7\times10^{7}\right)-\left(5.5\times10^{6}\right)$

Practice

3) $\left(3\times10^{4}\right)\times\left(5\times10^{5}\right)$

4) $\left(48\times10^{7}\right)\div\left(16\times10^{2}\right)$