

T3-16 Review for Test

Name Key Number \_\_\_\_\_ Period \_\_\_\_\_

Using properties of exponents, simplify each expression

$$1) \left(\frac{a^6}{a^2b^5}\right)^3$$

$$\frac{a^{18}}{a^6b^{15}} = \frac{a^{12}}{b^{15}}$$

$$2) (-3k^4)^2$$

$$(-3)^2 \cdot k^8$$

$$9k^8$$

$$3) \frac{n^{-5}m^3}{n^2m^{-2}} = \frac{m^2 \cdot m^3}{n^2 \cdot n^5}$$

$$= \frac{m^5}{n^7}$$

$$4) r^6 \cdot r^{-10}$$

$$= r^{-4}$$

$$= \frac{1}{r^4}$$

$$5) (a^4bc)^0$$

$$1$$

$$6) (3a^2b^3c^0)^3$$

$$3^3 a^6 b^9 c^0$$

$$27a^6b^9$$

7) What is the area of the rectangle?

$$\boxed{\phantom{0000}} \cdot 2b^7$$

$$4b^5$$

$$2b^7 \cdot 4b^5$$

$$= 8b^{12}$$

Perform each operation LARS

$$8) (8.3 \times 10^{-6}) - (7.4 \times 10^{-7})$$

$$0.74 \times 10^{-6}$$

$$7.56 \times 10^{-6}$$

$$9) (2 \times 10^{-3}) + (3.2 \times 10^{-1})$$

$$0.02 \times 10^{-1}$$

$$3.22 \times 10^{-1}$$

$$10) \frac{9.6 \times 10^{-3}}{1.2 \times 10^5}$$

$$8 \times 10^{-8}$$

$$11) (3.6 \times 10^8)(2.1 \times 10^{-4})$$

$$7.56 \times 10^4$$

$$12) (9.67 \times 10^6) + (3.45 \times 10^5)$$

$$96.7 \times 10^5$$

$$100.15 \times 10^5 \leftarrow \text{Not Sci. Notation}$$

$$\boxed{1.0015 \times 10^7}$$

$$14) \frac{4.62 \times 10^7}{1.2 \times 10^4}$$

$$\boxed{3.85 \times 10^3}$$

$$13) (4.5 \times 10^3)(1.6 \times 10^5)$$

$$1600 \times 10^3$$

$$\cancel{1600000} \quad 164,5 \times 10^3 \leftarrow \text{Not Sci. Notation}$$

$$1.645 \times 10^5$$

$$15) (3.64 \times 10^6) - (2.18 \times 10^4)$$

$$0.0218 \times 10^6$$

$$\boxed{3.6182 \times 10^6}$$

Convert to Scientific Notation:

$$16) 703,000,000,000$$

$$7.03 \times 10^{11}$$

$$17) 0.00000000058$$

$$5.8 \times 10^{-10}$$

$$18) 69,900,000$$

$$6.99 \times 10^7$$

$$19) 575,000,000$$

$$5.75 \times 10^8$$

Convert to Standard Notation

$$20) 6.27 \times 10^{-6}$$

$$0.00000627$$

$$21) 2.09 \times 10^{-9}$$

$$0.00000000209$$

$$22) 9.03 \times 10^2$$

$$903$$

$$23) 3.85 \times 10^{-4}$$

$$0.000385$$