

Algebra 1  
6.1 Homework

Name: Key  
Date: \_\_\_\_\_ Hour: \_\_\_\_\_

Evaluate the expression.

1.  $(-3)^0$   $\boxed{1}$

2.  $3^{-5} = \frac{1}{3^5} = \boxed{\frac{1}{243}}$

3.  $\frac{3^{-2}}{9^0} = \boxed{\frac{1}{9}}$

4.  $(-5)^{-3} = \frac{1}{(-5)^3} = \boxed{-\frac{1}{125}}$

Simplify the expression. Write your answer using only positive exponents.

5.  $x^{-6} = \boxed{\frac{1}{x^6}}$

6.  $7x^{-4}y^0 = \boxed{\frac{7}{x^4}}$

7.  $\frac{3^{-2}a^0}{b^{-2}} = \boxed{\frac{b^2}{9}}$

8.  $12f^0g^{-9}$

$\boxed{\frac{12}{g^9}}$

9.  $\frac{(-3)^6}{(-3)^3} = (-3)^3 = \boxed{-27}$

10.  $(-8)^3 \cdot (-8)^3$

$\boxed{(-8)^6 = 262,144}$

11.  $(h^3)^4$

$\boxed{h^{12}}$

12.  $(t^{-2})^6$

$\boxed{\frac{1}{t^{12}}}$

13.  $(-2y)^5$

$\boxed{-32y^5}$

14.  $\left(\frac{3x^2y^{-3}}{2x^{-3}y^2}\right)^3$

$\frac{27x^6y^{-9}}{8x^{-9}y^6} = \boxed{\frac{27x^{15}}{8y^{15}}}$

15.  $\left(\frac{5}{b}\right)^{-3}$

$\boxed{\frac{b^3}{125}}$

Evaluate the expression. Write your answer in scientific notation and standard form:

$\frac{3.9 \times 10^8}{1.3 \times 10^3}$

Scientific  
 $\boxed{3.0 \times 10^5}$

Standard  
 $\boxed{300,000}$