

Name: _____

Math 1 Review
Variables and Evaluating Expressions

Write each in exponential form.

1) $x \cdot x \cdot x \cdot x \cdot y \cdot y$

2) $3 \cdot 3 \cdot 3 \cdot a \cdot a \cdot a$

3) $5 \cdot x \cdot 3 \cdot x \cdot x \cdot y$

Write each in expanded form.

4) x^7

5) $2^3x^4y^2$

6) $a^2b^3c^5$

Write an algebraic expression for each verbal expression.

7) Three times the sum of a number and 6.

8) The product of 6 and the difference of x and 12.

9) Twice the sum of 9 and a number.

10) One-half the cube of a number.

11) Three times a number less than 4.

12) The sum of 2 and 3 times a number x .

13) Nine times an number cubed plus one.

Evaluate.

14) $z(x+y)$; use $x=6$, $y=8$, and $z=6$

15) $p^2 + m$; use $m=1$, and $p=5$

16) $\frac{y}{2+x}$; use $x = 1$ $y = 2$

17) $\frac{y+x^2}{2}$; use $x = 2$, and $y = -8$

18) Given the area of a triangle is $A = \frac{1}{2}bh$, find the area if the base is 10 inches and the height is 5 inches.

19) Given the Circumference formula $C = 2\pi r$ where r is the radius of the circle, find the circumference of a circle with a radius of 6 cm.

20) The formula $P = \frac{96.3F}{SL}$ can be used to calculate the precipitation rate at which sprinklers spread water. In the formula, P is the precipitation rate, F is the rate of water flow, S is the amount of space between the sprinklers, and L is the space between two rows of sprinklers. If the space between each sprinkler is 6, and the space between each row is 7, what is the approximate precipitation rate if the rate of water flow is 8.7?