

Expressions and Equations**6.EE****Apply and extend previous understandings of arithmetic to algebraic expressions.**

1. Write and evaluate numerical expressions involving whole-number exponents.
2. Apply the properties of operations to generate equivalent expressions. For example, apply the distributive property to the expression $3(2 + x)$ to produce the equivalent expression $6 + 3x$; apply the distributive property to the expression $24x + 18y$ to produce the equivalent expression $6(4x + 3y)$; apply properties of operations to $y + y + y$ to produce the equivalent expression $3y$.
3. Identify when two expressions are equivalent (i.e., when the two expressions name the same number regardless of which value is substituted into them). For example, the expressions $y + y + y$ and $3y$ are equivalent because they name the same number regardless of which number y stands for.

Solve the expressions below using $x = 4$ and $y = 3$.

1.) $3x + y^2$

1. _____

2.) $x^2 - 1$

2. _____

3.) $\frac{y^2}{2}$

3. _____

Simplify the expressions below.

4.) $8(x + 3)$

4. _____

5.) $11(x + y)$

5. _____

6.) $x(y + z)$

6. _____

Now work backwards using the distributive property.

7.) $3x + 9$

7. _____

8.) $5x + 25$

8. _____

Simplify the expression.

9.) $x + x + y + y + y$

9. _____

10.) $a + a + a + 25$

10. _____