

Simplifying Expressions1. Evaluate each expression for $x = -3$ and $y = -8$ and circle your simplified expressions.

a. $4x - y + 10$

b. $6 - x|x + y|$

c. $2\sqrt{-3x} - y$

d. $3y(x + y^2 - x)$

2. Simplify each of the following exponent expressions and circle your simplified expressions.

a. $\frac{4x^8}{12x^3}$

b. $-4x^2 \cdot (2x)^{-3}$

c. $(-x^5)^2$

d. $\left(\frac{3ab^3}{b^4}\right)^2$

f. $(2x)^3$

g. $\frac{8x^2}{6x^5}$

h. $(-3x^5)^4 \cdot -2x^5y^{10}$

i. $\left(\frac{2x^{-4}}{x^5}\right)^{-3}$

j. $\frac{b^6}{b^2}$

k. $2x^2 \cdot (5x^3)^2$

l. $(-2b)^2$

m. $\left(\frac{a^4}{b^2}\right)^2$

n. $2x^8y \cdot 3x^3y^0$

o. $5x^{-5}x^4$

p. $(-4a^3b^4)^2$

q. $\frac{(2x)^3y^3}{8x^2y^8}$

Solving Equations

1. $|2x - 4| = 10$

2. $3|x - 1| + 2 = 11$

3. $2|x + 3| - 5 = 7$

4. $|4 - 2y| + 5 = 9$

5. $3 + 2|x - 3| = 13$

6. $-3 - 2|x + 1| = -3$

7. $|2x + 6| - 10 = -3$

7. Solve each of the following formulas for the requested variable.

a. $4 + y = 2x + 20$ solve for x

b. $A = \frac{1}{2}bh$ solve for h

c. $ax^2 + bx + c = 0$ solve for b

d. $4x + 2y = 6$ Solve for y

e. $-5x + 4y = 10$ Solve for x

f. $x = y + (n - 1)d$ Solve for n