

1. Which of the following numbers is a prime number?

39, 91, 71, 45, 81, 201

2. Graph the following points on a coordinate system. $A(3, -2)$, $B(-2, -2)$, $C(3, 5)$ and $D(-2, 5)$. What shape do these points form?

3. Add the algebraic expressions.

a) $(3a + 2b) + (5a + b)$ b) $(-8a + 5b) + (5a - b)$ c) $(2x^2 + x - 10) + (x^2 - 5x - 2)$

4. Subtract the algebraic expressions.

a) $(3a + 2b) - (5a + b)$ b) $(2x + y) - (2x - 5y)$ c) $(2x^2 + x - 10) - (x^2 - 5x - 2)$

5. Simplify each of the following

a) $2(5x - 8) + 3(-2x + 1)$ b) $3(2x - 5) - 2(3x - 7)$ c) $4(2p - 3q) - 3(-p + q)$

6. Multiply the algebraic expressions as indicated.

a) $(3a + 2b)(5a + b)$ c) $(-8a + 5b)(5a - b)$ e) $(2x - 1)^3$
b) $(2x + 5y)(2x - 5y)$ d) $(2x - 1)^2$

7. Suppose that $x = 4$ and $y = -3$. Evaluate each of the algebraic expressions.

a) $2x - y + 1$ b) $-y^2 - 3x^2y$ c) $\sqrt{x^2 + y^2}$ d) $5x - 2y + 2x + y$

8. Perform the operations as indicated. Show all steps.

a) $(-2)^2$ d) $-2(-5)$ g) $20 - 3(-8)$
b) -2^2 e) $-2 - (-5)$ h) $\frac{(-2)^3 - 5(-3) - (-1)^4 + (-3)^2}{-2^2 - (-1)}$
c) $-2 - 5$ f) $-2(-(-5))$ i) $-3^2 - (-24) \div (5 - (-1)^3) \cdot 2$

9. Place one or more pairs of parentheses into the expression on the left-hand side to make the equation true. (This time the problem is correct, I checked.)

$$2 - 3 \cdot 5 - 2^2 - 4 \cdot 2 + 3 = 29$$