

1. Find the prime factorization for 440
2. Find the average of 6, 0, -13 , 5, 0, and -4 .
3. Simplify each of the following.

(a) $-2^2 - |-3^2 - 5(-2)| =$

(b) $\sqrt{-2(-1)^3 + |-6^2 - 12(-3) - |-2^2 - ((-1)^3 - 1)|} =$

(c) $\sqrt{-9} =$

(d) $-\sqrt{9} =$

4. Simplify each of the following.

(a) $(3a - 5b) + (3a - b) =$

(b) $-(x^2 - 3x + 1) - 5(-x + 1) - (8x - x^2 - 7) =$

(c) $(3a - 5b) - (3a - b) =$

(d) $3(4q - p) - (2q - p) + 2(-5q - p) =$

(e) $-2a(3a - 5b) =$

(f) $2(3x - 8) - 5(8x - 3) =$

5. Simplify each of the following.

(a) $x^2 \cdot x^3 =$

(b) $(x^2)^3 =$

6. Solve each of the following equations. Make sure to check your solution(s).

(a) $2x - 3 = -11$

(b) $-2x - 3 = 7$

(c) $\frac{x - 3}{7} = -2$

(d) $\frac{x}{7} - 3 = -1$

(e) $-4x - 3 = 13$

(f) $-x + 5 = -7$

(g) $\frac{a + 1}{4} = -9$

(h) $|2x - 3| = 11$

(i) $|2x - 3| = -11$

(j) $|2x - 3| = 3$

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7. Consider the points $A(-2, -5)$, $B(-2, 7)$, $C(3, -5)$, and $D(3, 7)$.
- (a) Graph these points in a rectangular coordinate system.
 - (b) Find the perimeter of the rectangle determined by the points given.
8. The ratio of cars to bicycles was 12 to 35.
- (a) There were 720 cars. How many bicycles were there?
 - (b) There were 700 bicycles. How many cars were there?
9. Ann took 5 exams. The scores on the first four were 93, 67, 87, and 91. What score did she earn on the fifth exam if her average was 86 points?
10. If we multiply a number by -2 and add 7, the result is 25. Find this number.
11. If we subtract 5 from the opposite of a number, we get -1 . Find this number.
12. Three times a number is 5 more than 16. Find this number.
13. The product of 3 and the opposite of a number is -63 . Find this number.