

Section 6.1 Algebraic Expressions and Formulas

Simplify each algebraic expression

1) $2x - 5x$

2) $6x^3 - 2x^3$

3) $5(2x - 10)$

4) $5(4x + 10) - 3$

5) $6(3z - 4) + 3(9z + 5)$

6) $6 - 9(3x + 4)$

7) $8 - 2(3y + 2) + 5y(y + 3)$

8) $3x - 2[3 - 7(9x + 5)]$

9) $15x^2 - 3 - 2[6(x^2 + 3) - 4]$

10) $4(x^2 - 2x + 3) - 3[2x(x + 1)]$

For Problems 11-13, the formula $C = \frac{5}{9}(F - 32)$ expresses the relationship between Fahrenheit temperature, F and Celsius temperature, C . Use the formula to convert the given Fahrenheit temperature to its equivalent temperature on the Celsius scale.

11) 32 degrees F

12) 98.6 degrees F

13) 212 degrees F

For Problems 14-15, A ball was thrown vertically upward from a height of 175 feet with an initial speed of 45 feet per second. The formula $h = 175 + 45t - 16t^2$ describes the ball's height above the ground h , in feet, t seconds after it was thrown. Use the formula to solve the following problems.

14) What is the ball's height 5 seconds after it was thrown?

15) What is the ball's height 3 seconds after it was thrown?

Carefully Read Page 310 – 311 and review Example 4. Then, complete Checkpoint 4.