

## Unit 7 – Review

1. Represent the following algebra tiles with an algebraic expression.

a)



b)



c)



2. Use algebra tiles to show each expression. Sketch the tiles you used.

a)  $3x^2 + 2x - 5$

b)  $-2x^2 - x$

3. **Simplify:**

a)  $5x + 6 + 3x$

b)  $3x - x + 2$

c)  $2x^2 - 4 + 3x - 3x^2 - 2 - 3x$

4. **Add** the following algebraic expressions.

a)  $(4x - 2) + (3x + 4)$

b)  $(-2x^2 - x + 1) + (x^2 + 3x - 2)$

5. **Subtract** the following algebraic expressions.

a)  $(3x + 2) - (2x + 5)$

b)  $(-2x^2 + 3x - 1) - (-x^2 - 4x + 2)$

6. **Multiply.**

a)  $(5x)(3x)$

b)  $(-2x)(-6)$

c)  $(4x^2)(-2x)$

7. **Expand.**

a)  $4(x + 3)$

b)  $-2x(3x + 2)$

c)  $3(x^2 - 2x + 4)$

d)  $x(5x - 3)$

8. **Expand and Simplify:**

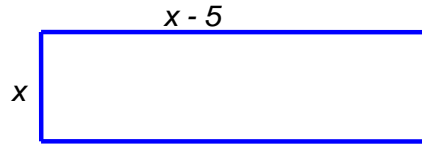
a)  $3x(x - 4) - 5(2x + 7)$

b)  $-4(4x - 2) + x(2x + 8)$

b)  $-x(3x - 5) - x(2x + 3)$

c)  $6(3x + 5) + 4(x - 9)$

9. Use the rectangle to answer the questions that follow.



1. Determine a simplified formula for the **perimeter**.

2. Use this formula to calculate the perimeter when  $x = 5$  cm.

3. Determine a simplified formula for the **area**.

4. Use this formula to calculate the area when  $x = 8$  cm.