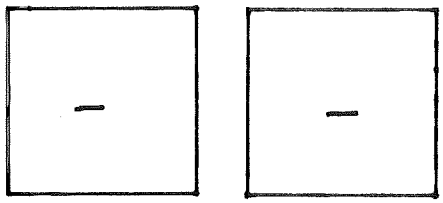
Algebra I
11.1-11.3 Review
Polynomials

NAME:_____
DATE:_____ HOUR:____

Use algebra tiles to model each polynomial. Then draw a diagram of your model.

1. $-2x^2$



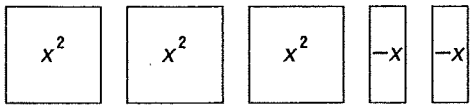
2. $5x - 4$

3. $3x^2 - x$

4. $x^2 + 4x + 3$

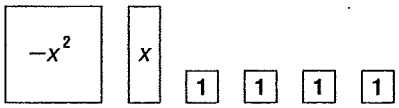
Write an algebraic expression for each model.

5.

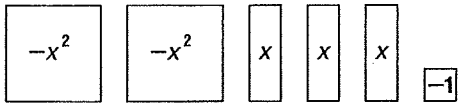


$3x^2 - 2x$

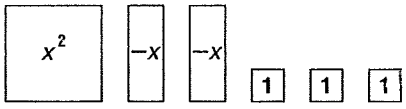
6.



7.



8.



Find each sum or difference.

1. $(2x + 3y) + (4x + 9y)$

$6x + 12y$

2. $(6s + 5t) + (4t + 8s)$

3. $(5a + 9b) - (2a + 4b)$

4. $(11m - 7n) - (2m + 6n)$

5. $(m^2 - m) + (2m + m^2)$

6. $(x^2 - 3x) - (2x^2 + 5x)$

7. $(d^2 - d + 5) - (2d + 5)$

8. $(2e^2 - 5e) + (7e - 3e^2)$

9. $(5f + g - 2) + (-2f + 3)$

10. $(6k^2 + 2k + 9) + (4k^2 - 5k)$

Find each product.

1. $x(5x^3 + x^2)$

$5x^4 + x^3$

2. $x(4x^2 + 3x + 2)$

3. $-2xy(2y + 4x^2)$

4. $-2g(g^2 - 2g + 2)$

5. $3x(x^4 + x^3 + x^2)$

6. $-4x(2x^3 - 2x + 3)$

7. $-4cx(10 + 3x)$

8. $3y(-4x - 6x^3 - 2y)$

9. $2x^2y^2(3xy + 2y + 5x)$

Simplify. Show your work.

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

$3x^2 - 4x - 5x$

$3x^2 - 9x$

11. $x(2x^2 - 4x) - 6x^2$

12. $6a(2a - b) + 2a(-4a + 5b)$

13. $4r(2r^2 - 3r + 5) + 6r(4r^2 + 2r + 8)$

14. $4n(3n^2 + n - 4) - n(3 - n)$

15. $2b(b^2 + 4b + 8) - 3b(3b^2 + 9b - 18)$

Find each product.

1. $(x + 2)(x + 3)$

$x^2 + 3x + 2x + 6$

$x^2 + 5x + 6$

2. $(x - 4)(x + 1)$

3. $(x - 6)(x - 2)$

4. $(p - 4)(p + 2)$

5. $(y + 5)(y + 2)$

6. $(2x - 1)(x + 5)$

7. $(3n - 4)(3n - 4)$

8. $(8m - 2)(8m + 2)$

9. $(k + 4)(5k - 1)$

10. $(3x + 1)(4x + 3)$

11. $(x - 8)(-3x + 1)$

12. $(5t + 4)(2t - 6)$