Name: _____ Date: _____

Prerequisite Skills

Polynomials

1. Simplify.
a) $-3(14x)$ **b)** $9(8x)$
c) $16(-4x)$ **d)** $-3.2(5x)$

2. Simplify.
a) $-2x^2 + 6x + 5 - 8x^2 + 7x - 2$
b) $6x - 7 + 8x - 14$
c) $6x^2 - 4x + 7 - 3x^2 + 7x - 1$
d) $3x^2 - 6x + 4 - 8x^2 + 3x - 15$

3. Expand and simplify.
a) $7(x - 12)$ **b)** $-5x(6x + 3)$
c) $4x(3x - 7)$ **d)** $-9x(1 + 2x)$

4. Use algebra tiles to model each rectangle. Then find an expression, in simplified form, for the area.
a) Length: $x + 3$ Width: 4
b) Length: $2x + 1$Width: $3x$

Draw and Interpret Graphs

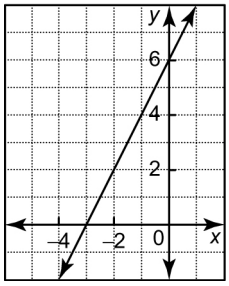
5. Graph each linear relation.

a) $y = -x + 6$ **b)** $y = -\frac{1}{3}x + 4$

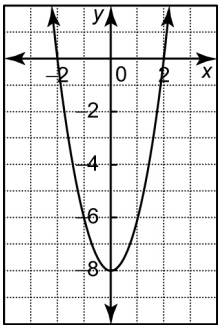
c) $x + 2y - 6 = 0$ **d)** $2x + y - 8 = 0$

6. Find the x- and y-intercepts of each relation.

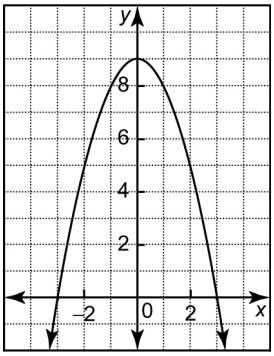
a)



b)



c)



Area

7. Use algebra tiles to model each area.
a) $x^2 + 9x$ **b)** $x^2 + 2x + 3$
c) $3x^2 + 8x + 3$ **d)** $6x^2 + 7x + 2$

8. Refer to question 7. Find each area if $x = 5$ m.

Number Skills

9. List the factors of each number.
a) 36
b) 27
c) 56
d) 12

Name: _____ Date: _____

10. Find two integers that have each product and sum

	Product	Sum
a)	5	6
b)	12	7
c)	9	0
d)	6	–7
e)	–20	–1
f)	–21	4

Solve Equations

11. Solve.

a) $3x + 5 = -4$ **b)** $8x - 1 = 7$

c) $2x - 5 = x + 14$ **d)** $4x - 2 = x + 7$

Factor Polynomials

12. Find the greatest common factor, then factor each expression.

a) $3x^2 + 6$ **b)** $2x^2 + x$

c) $4x^2 - 28x$ **d)** $-3x^2 - 12x$

e) $-3x^3 - x^2$ **f)** $21x^2 - 35x$

g) $-6x - 36$ **h)** $-10x + 1000$

13. Factor each trinomial.

a) $x^2 + x - 12$ **b)** $x^2 + 8x + 7$

c) $x^2 - 13x + 22$ **d)** $x^2 + 3x - 4$

e) $x^2 - 3x - 18$ **f)** $x^2 + 2x + 1$