

Name: _____

Date: _____

Math 9 HW: Section 5.6 Multiplying Polynomials:

1. Simplify each of the following expressions:

a) $3abc(8ab^4c)$	b) $(-13ab^3c)(-2a^3)(9bc^3)$	c) $8ab(12 - 3a + 7ac)$
d) $6abc(2a + 4b - 7)$	e) $12ab^3(1 + 2a^2b^3 - 3a)$	f) $2a^2b(15ac^2 - bc)$
g) $-4a^2b(2a + 4bc)$	h) $4abc^3(9a^2 - 3b^2c)$	i) $-3ac(3a^3 + 4a^2b - 12c)$
j) $\frac{3x^2y^2 - 9xy + 12x}{3x}$	k) $\frac{3x^2y^2 - 9xy + 12x}{3x}$	l) $\frac{3x^2y^2 - 9xy + 12x}{3x}$
m) $\frac{18ab - 36a^3b}{9ab}$	n) $\frac{20ab - 16b}{4b}$	o) $\frac{3ab^2 - 12ab^3}{3ab}$
p) $\frac{3x^2y^2 - 9xy + 12x}{3x}$	q) $\frac{-24x^3y - 16x^2y - 12y^3x}{4xy}$	r) $\frac{-15x^3y^2z - 20x^3y + 35y^3x^3}{5x^2}$

2. Simplify each of the following expressions:

a) $(a + 3)(2a - 1)$	b) $(4 + 2x)(3 - 2x)$	c) $(6 - 2a)(5 + 3a)$
d) $(3a + 1)(2a - 7)$	e) $(3 - 4a)(1 + 2a)$	f) $(1 + 11a)(15a - 1)$
g) $(2x - 3)(3x + 1) - (3x + 2)$		h) $(x + 1)(2x - 1) - 3(x + 1)$
i) $(x + 1)(2x + 1) - (x + 3)(x + 2)$		j) $(x - 3)(x + 1) + (x + 2)(x - 3)$

3. Find the area of the shaded region for each of the following diagrams:

