

Name: _____

Date: _____

M8H HW CH2 Lesson 8 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. Expand and simplify each of the following

a) $(2x-1)(3x+2)$	b) $(4x-3)(5x+2)$	c) $(2x-3)(5x+4)$
d) $(23x+17)(6x-5)$	e) $(5x-4)^2$	f) $(2x+y-2)^2$

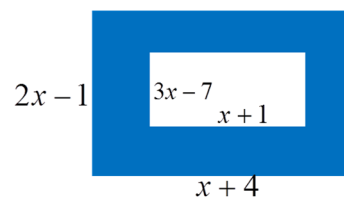
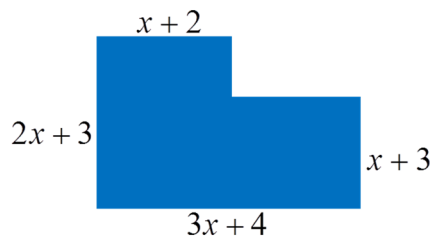
3. Expand and simplify the following. Combine liketerms and reduce your equation

a) $(2x-3)(4x^2-6x+5)$	b) $(3x-2)(5x^2+11x-10)$
c) $(4x+1)(7x^2-8x+9)$	d) $(2x-1)(3x+2)-(5x^2-11x+12)$
e) $2x(2x-3)-4x(3-2x)+5x(6-4x)$	f) $(2x+1)(2x-1)-(3x+2)(3x-2)$
g) $(3x+1)^2-(3x+4)(2x+3)$	h) $(2x-1)(5x-3)(4x+2)$

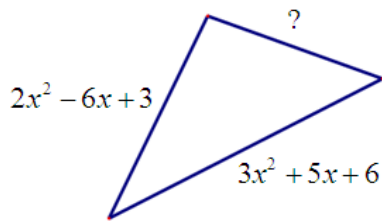
i) $(3x-1)^3$	J) $(3x+1)(5x+2)(3x-4) - 2x^3 + 4x^2$
k) $(2x-1)(2x+1)(2x-1)(2x+1)$	L) $(3x+1)^2 - (x-4)^2 - (2x+3)^2$

4. What is the difference between “simplifying” an expression and “solving” an equation?

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



6. The perimeter of a triangle is $6x^2 + 7x - 12$. Find the missing side.



7. Given the area and length of one side of a rectangle, find the width in terms of "x":

a) $A = 10x^2 - 11x - 6$, $L = (2x - 3)$

b. $A = 18x^2 - 93x + 84$; $L = (6x - 7)$

8. Given that $(1 + x + x^2 + x^3 + x^4)^2 = Ax^8 + Bx^7 + Cx^6 + Dx^5 + Ex^4 + Fx^3 + Gx^2 + Hx + 1$

What is the value of $A + B + C + D + E + F + G + H$?