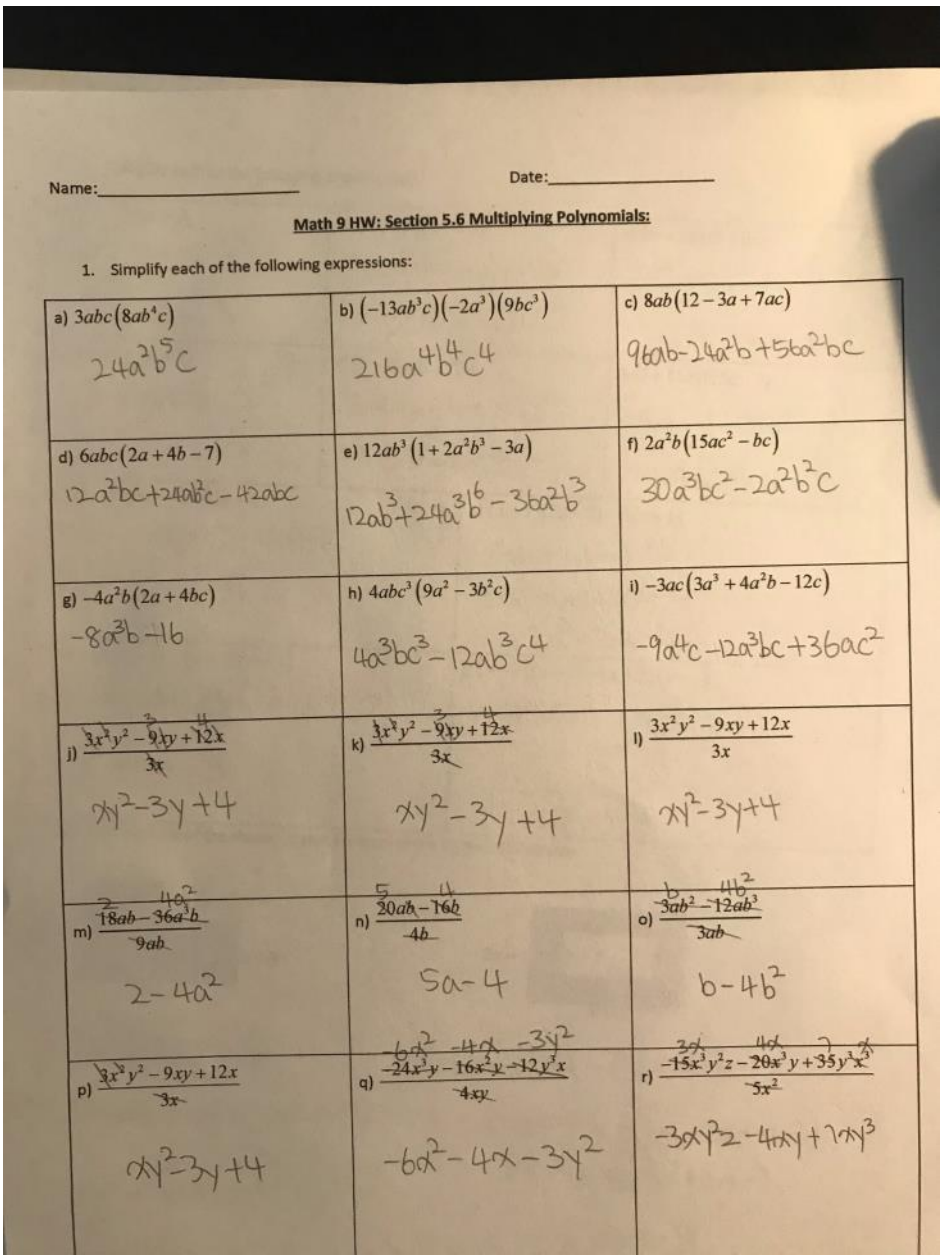
5.6

Sunday, October 18, 2020 11:36 AM



Name:_____ Date:_____

Math 9 HW: Section 5.6 Multiplying Polynomials:

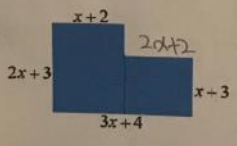
1. Simplify each of the following expressions:

a) $3abc(8ab^4c)$ $24a^2b^5c$	b) $(-13ab^3c)(-2a^3)(9bc^3)$ $216a^4b^4c^4$	c) $8ab(12-3a+7ac)$ $96ab-24a^2b+56a^2bc$
d) $6abc(2a+4b-7)$ $12a^2bc+24ab^2c-42abc$	e) $12ab^3(1+2a^2b^3-3a)$ $12ab^3+24a^3b^6-36a^2b^3$	f) $2a^2b(15ac^2-bc)$ $30a^3bc^2-2a^2b^2c$
g) $-4a^2b(2a+4bc)$ $-8a^3b-16$	h) $4abc^3(9a^2-3b^2c)$ $4a^3bc^3-12ab^3c^4$	i) $-3ac(3a^3+4a^2b-12c)$ $-9a^4c-12a^3bc+36ac^2$
j) $\frac{3x^2y^2-9xy+12x}{3x}$ xy^2-3y+4	k) $\frac{3x^2y^2-9xy+12x}{3x}$ xy^2-3y+4	l) $\frac{3x^2y^2-9xy+12x}{3x}$ xy^2-3y+4
m) $\frac{18ab-36a^2b}{9ab}$ $2-4a^2$	n) $\frac{20ab-16b}{4b}$ $5a-4$	o) $\frac{3ab^2-12ab^3}{3ab}$ $b-4b^2$
p) $\frac{3x^2y^2-9xy+12x}{3x}$ xy^2-3y+4	q) $\frac{-24x^3y-16x^2y-12y^3x}{4xy}$ $-6x^2-4x-3y^2$	r) $\frac{-15x^3y^2z-20x^3y+35y^3x^3}{5x^2}$ $-3xy^2z-4xy+7xy^3$

2. Simplify each of the following expressions:

a) $(a+3)(2a-1)$ $2a^2-a+6a-3$ $2a^2+5a-3$	b) $(4+2x)(3-2x)$ $12-8x+6x-4x^2$ $12-2x-4x^2$	c) $(6-2a)(5+3a)$ $30+18a-10a-6a^2$ $30+8a-6a^2$
d) $(3a+1)(2a-7)$ $6a^2-21a+2a-7$ $6a^2-19a-7$	e) $(3-4a)(1+2a)$ $3+6a-4a-8a^2$ $3+2a-8a^2$	f) $(1+11a)(15a-1)$ $15a-1+165a^2-11a$ $165a^2+4a-1$
g) $(2x-3)(3x+1)-(3x+2)$ $6x^2+2x-9x-3-3x-2$ $6x^2-10x-5$	h) $(x+1)(2x-1)-3(x+1)$ $(x+1)(2x-4)$ $2x^2-4x+2x-4$ $2x^2-2x-4$	
i) $(x+1)(2x+1)-(x+3)(x+2)$ $2x^2+x+2x+1-(x^2+2x+3x+6)$ x^2-4x-5	j) $(x-3)(x+1)+(x+2)(x-3)$ $((x+1)+(x+2))(x-3)$ $(2x+3)(x-3)$ $2x^2-6x+3x-9$ $2x^2-3x-9$	

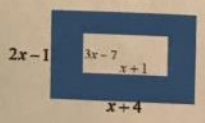
3. Find the area of the shaded region for each of the following diagrams:



$(x+2)(2x+3)+(2x+2)(x+3)$

$2x^2+3x+4x+6+2x^2+6x+2x+6$

$4x^2+15x+12$



$(2x-1)(x+4)-(3x-7)(x+1)$

$2x^2+8x-x-4-(3x^2+3x-7x-7)$

$2x^2+7x-4-3x^2+4x-7$

$-x^2+11x-11$