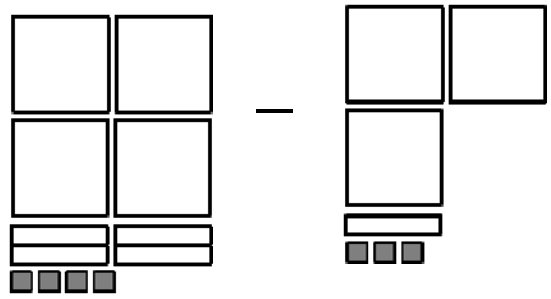
Math 9 **Chapter 5.4 – Subtracting Polynomials** **Date:** _____

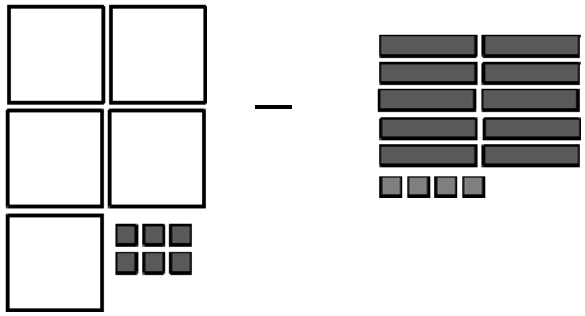
Name: _____ **Period:** _____

1. Write the polynomial difference modelled by each set of tiles.

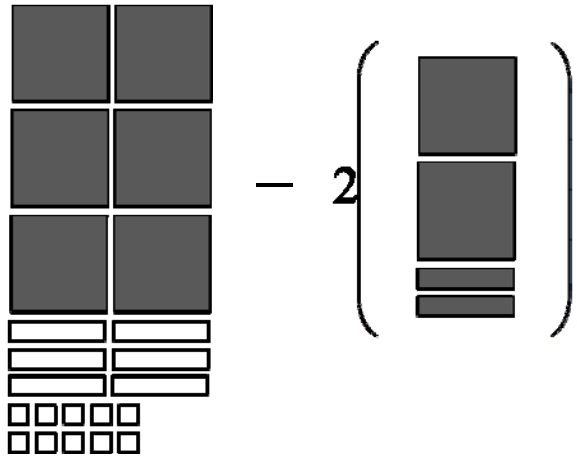
a)



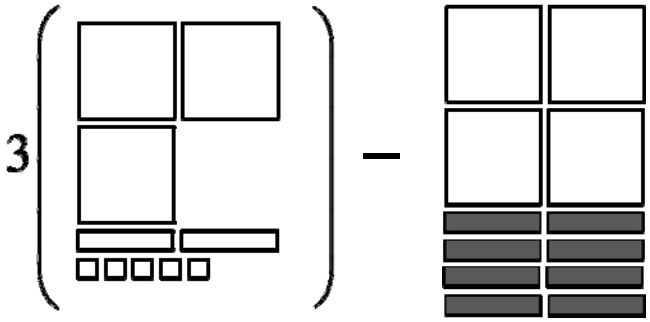
b)



c)



d)



2. Subtract these polynomials.

a)

$$\begin{array}{r} 7x^2+3x+4 \\ -\ 5x^2+2x+1 \\ \hline \end{array}$$

b)

$$\begin{array}{r} 10x^2-3x+5 \\ -\ -8x^2-5x+10 \\ \hline \end{array}$$

c) $-4x^2-12x+28$ $-\quad 4x^2-9x-30$	d) $-x^2+11x-18$ $-\quad 8x^2-4x+27$

3. Subtract.

a) $(4x+2)-(-2x+3)$	b) $(-5x+2)-(x^2+x-3)$
c) $(-2x^2+3x-1)-(-x^2+x+3)$	d) $(-2x+x^2-4)-(3-2x^2+4x)$
e) $(24x-12x^2+1)+(15-20x-3x^2)$	f) $(x^2-3xy+y^2)-(-2xy+x^2-y^2)$
g) $(-7x^3-3x^2)-(x^3+7x^2+11x)-(7x^3+4x^2+10x)$	

h) $\left(-x^2y-5xy-16y\right)-\left(7x^2y+15y-10xy\right)-\left(-2xy+x^2y\right)$

i) $\left(10x^2y-7xy^2-6xy+18x\right)-\left(-7x+9x^2y-18y^2x-4yx\right)-\left(-xy+10yx^2\right)$

4. Determine the answer to each of the following.

a) $9x-7\left(4-7x\right)$

b) $-2\left(x-y\right)-\left(x+y\right)$

c) $9\left(2xy+x+2y\right)-4\left(xy-3x-5y\right)$

d) $-x(x+4)+2(x^2-3)-x(x^2-x)$

e) $-x(xy+y)+y(x-y)-xy(x+2)$

5. The perimeter of a triangle is $7y-3z$. Two sides are $4y+2z$ and $7z$. What is the other side?

6. The perimeter of a rectangle is $12w+8$ and the length is $4w-5$. What is the width?