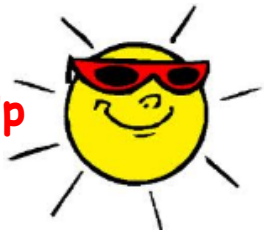
Wednesday
February 9, 2011

Lets Warm-Up



$(2a^2 + a - 3b - 7ab + 3b^2) + (-4b^2 + 3ab + 6b - 5a + 5a^2)$

$2a^2 + a - 3b - 7ab + 3b^2 - 4b^2 + 3ab + 6b - 5a + 5a^2$

$2a^2 + 5a^2 + 3b^2 - 4b^2 + a - 5a - 3b + 6b - 7ab + 3ab$

$7a^2 - b^2 - 4a + 3b - 4ab$

$7a^2 - 1b^2 + 3b - 4ab - 4a$

5. Use algebra tiles to model each sum of binomials. Record your answer symbolically.

a) $(5g + 3) + (2g + 4)$

b) $(3 - 2j) + (-4 + 2j)$

c) $(p + 1) + (5p - 6)$

d) $(7 + 4m) + (-5m + 4)$

6. Add these polynomials. Visualize algebra tiles if it helps.

a) $2x + 4$
$+ 3x - 5$

b) $3x^2 + 5x$
$+ -2x^2 - 8x$

c) $3x^2 + 5x + 7$
$+ -8x^2 - 3x + 5$

binomials. Record your answer symbolically.

a) $(5g + 3) + (2g + 4)$ $7g + 7$

b) $(3 - 2j) + (-4 + 2j)$ -1

c) $(p + 1) + (5p - 6)$ $6p - 5$

d) $(7 + 4m) + (-5m + 4)$ $-m + 11$

ME

6. Add these polynomials. Visualize algebra tiles if it helps.

a) $2x + 4$
$+ 3x - 5$
$5x - 1$

b) $3x^2 + 5x$
$+ -2x^2 - 8x$
$x^2 - 3x$

c) $3x^2 + 5x + 7$
$+ -8x^2 - 3x + 5$
$-5x^2 + 2x + 12$

Apply

ME

8. Use a personal strategy to add.

a) $(6x + 3) + (3x + 4)$ $9x + 7$

b) $(5b - 4) + (2b + 9)$ $7b + 5$

c) $(6 - 3y) + (-3 - 2y)$ $3 - 5y$ $\Leftrightarrow -5y + 3$

d) $(-n + 7) + (3n - 2)$ $2n + 5$

e) $(-4s - 5) + (6 - 3s)$ $-7s + 1$

f) $(1 - 7h) + (-7h - 1)$ $-14h$

g) $(8m + 4) + (-9 + 3m)$ $11m - 5$

h) $(-8m - 4) + (9 - 3m)$ $-11m + 5$

9. Add. Which strategy did you use each time?

a) $(4m^2 + 4m - 5) + (2m^2 - 2m + 1)$

b) $(3k^2 - 3k + 2) + (-3k^2 - 3k + 2)$

c) $(-7p - 3) + (p^2 + 5)$

d) $(9 - 3t) + (9t + 3t^2 - 6t)$

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

f) $(3x^2 - 7x + 5) + (6x - 6x^2 + 8)$

g) $(6 - 7x + x^2) + (6x - 6x^2 + 10)$

h) $(1 - 3r + r^2) + (4r + 5 - 3r^2)$

9. a) $6m^2 + 2m - 4$

b) $-6k + 4$

c) $p^2 - 7p + 2$

d) $3t^2 + 9$

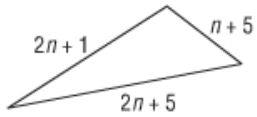
e) $5x^2 - 2x + 7$

f) $-3x^2 - x + 13$

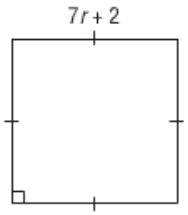
g) $-5x^2 - x + 16$

h) $-2r^2 + r + 6$

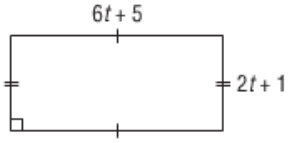
i)



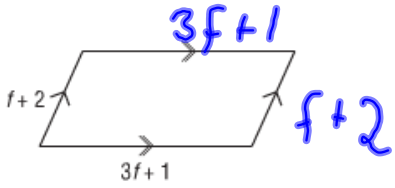
ii)



iii)



iv)



a) i) $(2n + 1) + (n + 5) + (2n + 5) = 5n + 11$

ii) $(7r + 2) + (7r + 2) + (7r + 2) + (7r + 2) = 28r + 8$

iii) $(6t + 5) + (2t + 1) + (6t + 5) + (2t + 1) = 16t + 12$

iv) $(3f + 1) + (f + 2) + (3f + 1) + (f + 2) = 8f + 6$

$P = (3f + 1) + (f + 2) + (3f + 1) + (f + 2)$

$3f + f + 3f + f + 1 + 2 + 1 + 2$

$8f + 6$

Section 5.4
Subtracting Polynomials

$(-2a^2 + a - 1) - (a^2 - 3a + 2)$

$-2a^2 + a - 1 - a^2 + 3a - 2$

$-2a^2 - a^2 + a + 3a - 1 - 2$

$-3a^2 + 4a - 3$

$5 - -4 =$ Adding the opposite

$5 + +4 = 9$

1. Remove the brackets
2. Group like terms
3. Simplify

$(5x^2 - 3xy + 2y^2) - (-8x^2 + 7xy - 4y^2)$

$5x^2 - 3xy + 2y^2 + 8x^2 - 7xy + 4y^2$

$5x^2 + 8x^2 + 2y^2 + 4y^2 - 3xy - 7xy$

$13x^2 + 6y^2 - 10xy$

$(9e + 9f - 3e^2 + 4f^2) - (-f^2 - 2e^2 + 3f - 6e)$

$9e + 9f - 3e^2 + 4f^2 + f^2 + 2e^2 - 3f + 6e$

$-3e^2 + 2e^2 + 4f^2 + f^2 + 9e + 6e + 9f - 3f$

$-1e^2 + 5f^2 + 15e + 6f$

$$(-3x^2+5x-3y^2)-(8x^2-3x+6y^2)$$

$$-3x^2+5x-3y^2\boxed{-8x^2+3x-6y^2}$$

$$-3x^2-8x^2-3y^2-6y^2+5x+3x$$

$$-11x^2-9y^2+8x$$

A student subtracted
$(2x^2 + 5x + 10) - (x^2 - 3)$ like this:

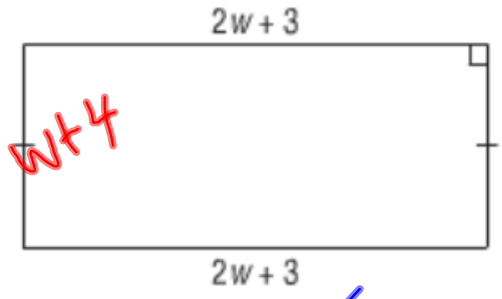
$(2x^2 + 5x + 10) - (x^2 - 3)$

$= 2x^2 + 5x + 10 - x^2 + 3$

$= x^2 + 8x + 10$

The perimeter of each polygon is given.
Determine each unknown length.

a) $6w + 14$



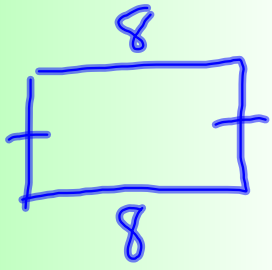
$P = 6w + 14$

$(6w+14)-(4w+6)$

$6w+14-4w-6$

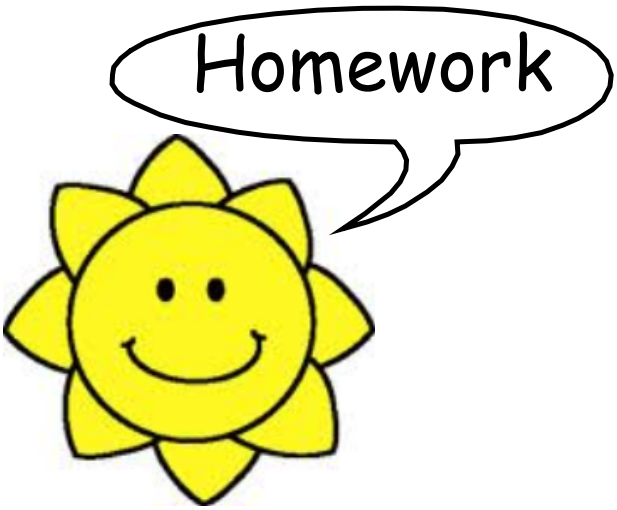
$6w-4w+14-6$

$2w+8$



$P = 20$

$$(3x^2 - 4x + 5) + (-8x^2 + 10) - (-10x^2 + 5x - 18)$$



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7 [a, c]
8 **ALL!**
12 [a, b]
13 [b, c, d]
15 [a, c, e]

Show calculation!