

**HOMEWORK
ANY
QUESTIONS?**

14. Simplify each polynomial.

a) $3x^2 + 5y - 2x^2 - 1 - y$

b) $pq - 1 - p^2 + 5p - 5pq - 2p$

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

d) $3r^2 - rs + 5s + r^2 - 2rs - 4s$

e) $4gh + 7 - 2g^2 - 3gh - 11 + 6g$

f) $-5s + st - 4s^2 - 12st + 10s - 2s^2$

14. a) $x^2 + 4y - 1$

c) $4x^2 + 7xy - 2y - 7x$

e) $-2g^2 + 6g + gh - 4$

b) $-p^2 + 3p - 4pq - 1$

d) $4r^2 - 3rs + s$

f) $-6s^2 + 5s - 11st$

15. Identify the equivalent polynomials.

Justify your answers.

- a) $1 + 5x$
- b) $6 - 2x + x^2 - 1 - x + x^2$
- c) $4x^2 - 7x + 1 - 7x^2 + 2x + 3$
- d) $4 - 5x - 3x^2$
- e) $2x^2 - 3x + 5$
- f) $3x + 2x^2 + 1 - 2x^2 + 2x$

a) $1 + 5x$

c) $4x^2 - 7x^2 - 7x + 2x + 1 + 3$
 $- 3x^2 - 5x + 4$

f) $2x^2 - 2x^2 + 3x + 2x + 1$
 $5x + 1$

b) Simplify each polynomial. How do you know that your answers are correct?

i) $-2 + 4r - 2r + 3$

ii) $2t^2 - 3t + 4t^2 - 6t$

iii) $3c^2 + 4c + 2 + c^2 + 2c + 1$

iv) $15x^2 - 12xy + 5y + 10xy - 8y - 9x^2$

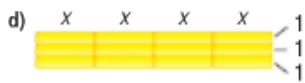
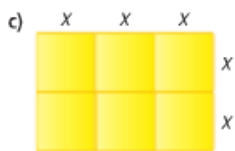
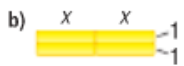
i) $2r + 1$

ii) $6t^2 - 9t$

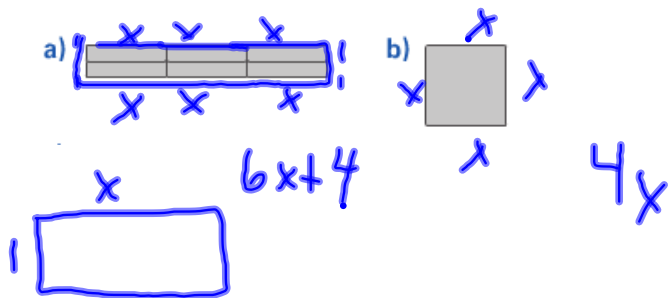
iii) $4c^2 + 6c + 3$

iv) $6x^2 - 2xy - 3y$

19. Write a polynomial to represent the perimeter of each rectangle.



19. a) $12x$ b) $4x + 4$ c) $10x$ d) $8x + 6$



Group
Simplify

$$-6x^2y + 5x - 3x^2y - 8x^2 + 3x - 15x^2$$

$$-6x^2y - 3x^2y - 8x^2 - 15x^2 + 5x + 3x$$

$$-9x^2y - 23x^2 + 8x$$

$$-23x^2 - 9x^2y + 8x$$

Section 5-3



Tuesday
February 8, 2011

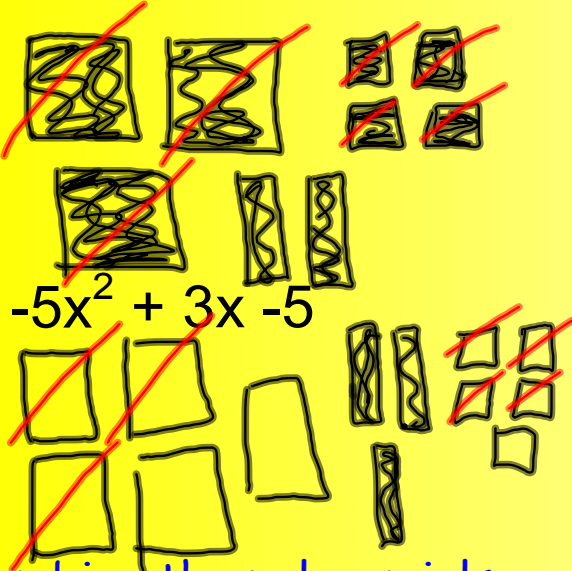
Adding Polynomials

Model



$(+)(-)$ -
 $(-)(-)$ +
 $(+)(+)$ +

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



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

Combine the polynomials

$$-2x^2$$



$$5x$$



$$-1$$



$$-2x^2 + 5x - 1$$

$$(3x^2 + 2x + 4) + (-5x^2 + 3x - 5)$$

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

$$3x^2 + 2x + 4 - 5x^2 + 3x - 5$$

$$3x^2 - 5x^2 + 2x + 3x + 4 - 5$$

$$-2x^2 + 5x - 1$$

Adding symbolically

Add horizontally

$$(7s+14)+(-6s^2+s-6)$$

$$7s+14-6s^2+s-6$$

$$-6s^2+7s+s+14-6$$

$$-6s^2+8s+8$$

(A)

$$54+98=$$

(B)

$$\begin{array}{r} 54 \\ +98 \\ \hline \end{array}$$

$$\begin{array}{r} 54 \\ +98 \\ \hline \end{array}$$

Add vertically

1. Align like terms, then add their coefficients

$$\begin{array}{r} 0s^2+7s+14 \\ + -6s^2+s-6 \\ \hline -6s^2+8s+8 \end{array}$$

Add.

$$a) (-3x^2 + 4x - 2) + (3x^2 - 6x + 5)$$

$$-3x^2 + 4x - 2 + 3x^2 - 6x + 5$$

$$-3x^2 + 3x^2 + 4x - 6x - 2 + 5$$

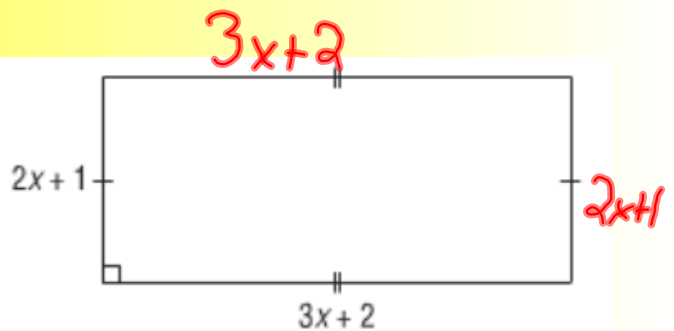
$$\textcircled{-2x + 3}$$

$$b) \begin{array}{r} -5y^2 + 3y - 10 \\ + 3y^2 - 8y + 6 \\ \hline \end{array}$$

$$-2y^2 - 5y - 4$$



- a) Write a polynomial for the perimeter of this rectangle.
Simplify the polynomial.



$$\begin{aligned} P &= (2x+1) + (3x+2) + (2x+1) + (3x+2) \\ &= 2x+3x+2x+3x+1+1+2+2 \\ &= 10x+6 \end{aligned}$$



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5, 6, 8 [a, c, e, g]

9 [a, c, e, g]

10 [i, iii, iv]

