DECEMBER 10, 2015

UNIT 4: POLYNOMIALS

SECTION 5.2:
LIKE TERMS AND
UNLIKE TERMS

M. MALTBY INGERSOLL
MATH 9

WHAT'S THE POINT OF TODAY'S LESSON?

We will continue working on the Math 9 Specific Curriculum Outcome (SCO) "Patterns and Relations 5" OR PR5 which states:

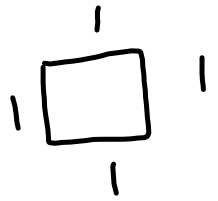
PR5: "Demonstrate an understanding of polynomials (limited to polynomials of degree less than or equal to 2)."

What does THAT mean???

Polynomials, or "pre-algebra", prepare us for solving equations ("algebra").

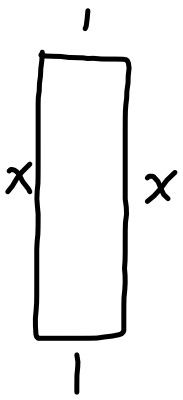
SCO PR5 means that we will learn about the different parts of polynomials which are a combination of numbers, variables (letters) and mathematical operations (+ / - / x). We will use "algebra tiles" (little plastic rectangles and squares) to help us understand polynomials.

HOMEWORK QUESTIONS?
(Pages 222 / 223, #6 TO #8, #12 and #13)



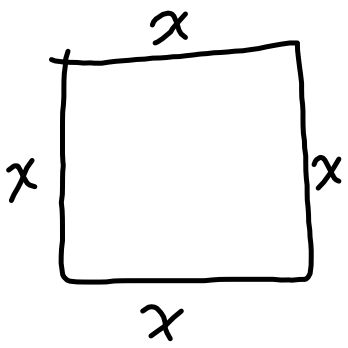
$P = 1+1+1+1$

$= 4$



$P = x+x+1+1$

$= 2x+2$



$P = x+x+x+x$

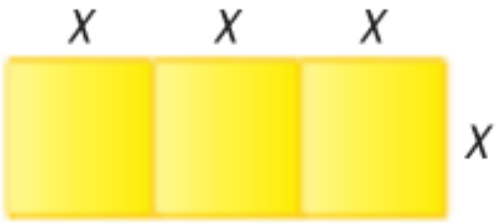
$= 4x$

EXAMPLE 3 - PAGE 220/221:

Write a polynomial to represent the perimeter of each rectangle.

Remember: P (rectangle) = s + s + s + s OR
= 2l + 2w

a)



$P = x + x + x + x + x + x + x + x$
$= 3x + x + 3x + x$
$= 8x$

b)

$P = x + x + x + 1 + 1 + x + x + x + 1 + 1$
$= 3x + 2 + 3x + 2$
$= 6x + 4$

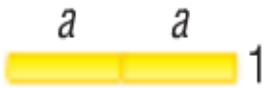
EXAMPLE 3 - PAGE 220/221 (cntd.):

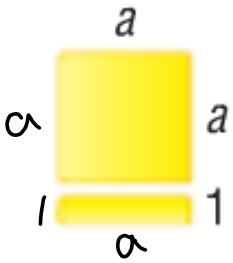
Each polynomial represents the perimeter of a rectangle. Use algebra tiles to make the rectangle.

a) 4a + 2 **b) 10b**

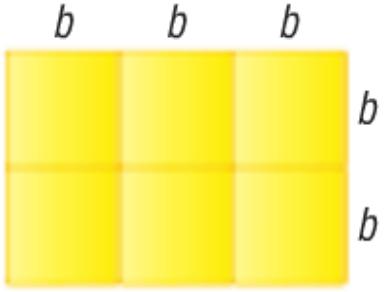
Work backward...

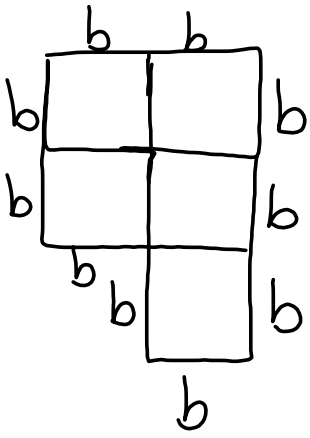
4a + 2
= 2a + 2a + 1 + 1

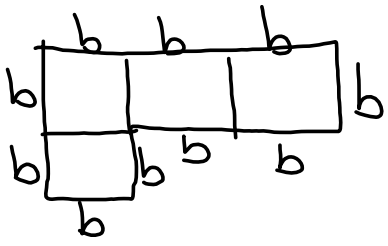




10b
= 4b + 4b + b + b
OR
= 3b + 3b + 2b + 2b





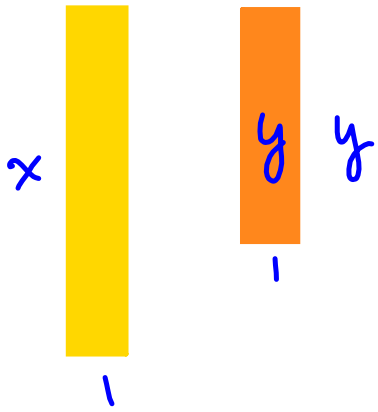


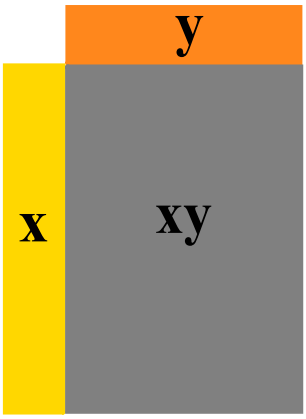
EXAMPLE 4 - PAGE 221:

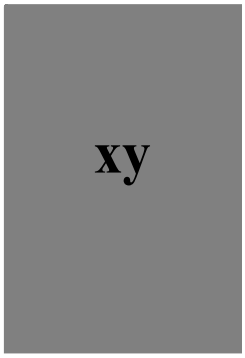
A polynomial may contain more than one variable. Here is a polynomial containing two variables - "x" and "y"; simplify the polynomial:

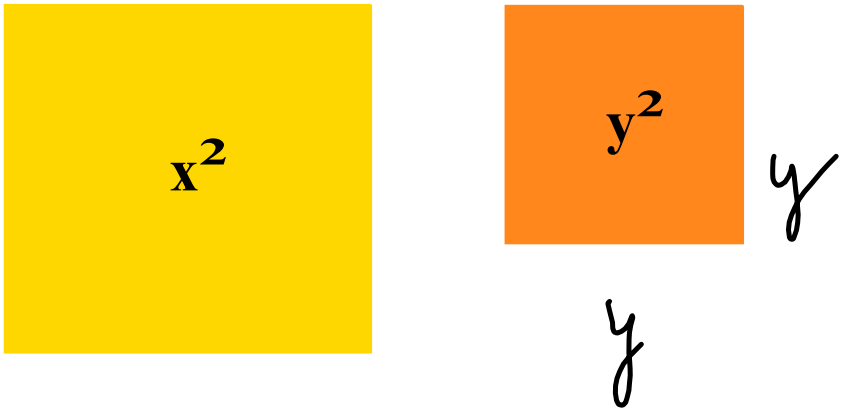
unlike terms (diff. degrees)

$$4xy - y^2 - 3x^2 + 2xy - x - 3y^2$$
$$= 4xy + 2xy - y^2 - 3y^2 - 3x^2 - x$$
$$= 6xy - 4y^2 - 3x^2 - x$$
$$= -3x^2 - 4y^2 - x + 6xy$$


x
1
y
y
1


y
x
xy


xy


x^2
y^2
y
y

CONCEPT REINFORCEMENT:

MMS9

Page 223: #14, #15 and #19
Page 224: #20 and #22