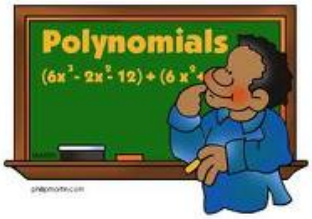
Now before we reach this "light at the end of the tunnel" we have a lot of work to do!

Unit 5



Polynomials

How many terms are in each of the following:

		Terms	Classify [monomial, binomial, trinomial, polynomial]
A.	$2x^3 + 4x$	2	binomial
B.	$-3y$	1	monomial
C.	$2x + 4x^2 + 4 - 3x$	3	trinomial

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

$-x + 4x^2 + 4$

What is the coefficient

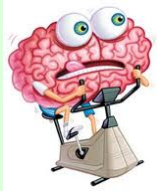
↑ the number found in front of the variable

A. $3x$ 3

B. -13 ← constant

C. $-6x^3$ -6

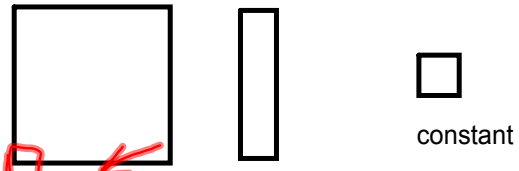
Identify the degree and constant term for each of the following:



	Degree (the largest exponent)	Constant
$2x^2 + 4x - 2$	2	-2
$3y - 4y^3 + 6y^2$	3	—

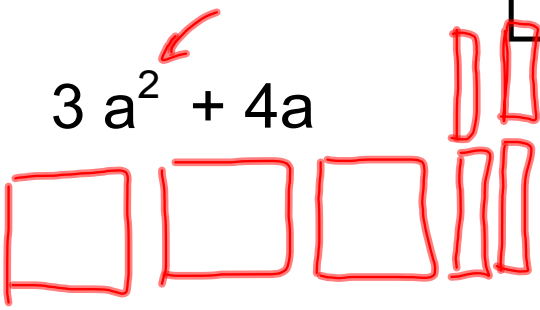
$3x - 2x^2 - 4$

Using algebra tiles model...



x^2 x

A. $3a^2 + 4a$



positive -not shaded

negative shaded

B. $3y^2 - 4y + 2$

Group and simplify each of the following:

A. $4x^2 - 5x - 3x^2 - 8 + 4 + 8x$

$4x^2 - 3x^2 - 5x + 8x + 4 - 8$

$x^2 + 3x - 4$

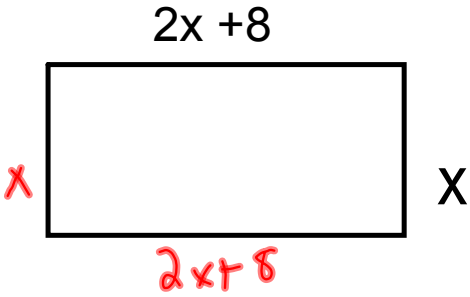
$(3)(4)$
$(4)(3)$

B. $-2yx + 3y^2 - 3x + 2xy - 4x - 4y^2$

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

$-y^2 - 7x$

A. Write a simplified expression for the perimeter of the following:



$2x+2x+x+x+8+8$

$6x+16$

B. Find the perimeter if x =3

$6x+16$

$6(3)+16$

$18+16$

34

Add or Subtract the following:

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

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

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

$-2x^2 - 1x - 4$

B. $(-4x^2 - 10x + 2) - (6x^2 + 2x - 8)$

$-4x^2 - 10x + 2 - 6x^2 - 2x + 8$

$-4x^2 - 6x^2 - 10x - 2x + 2 + 8$

$-10x^2 - 12x + 10$

1 - 12
17 - 22

* Show your work

Warm-Up

1. A craft store wants to know if customers are satisfied with the product selection. To find out, they interview every 20th person leaving the store for 1 week. Which sampling method does the store use?

Interval

A. ~~Simple random sampling~~
B. systematic sampling
C. Cluster sampling
D. ~~Self-selected sampling~~

everyone every house

2. A town council wants to know the public's opinion about increasing taxes to pay for more housing for the homeless. They hire people to conduct door-to-door interviews in randomly selected areas of town. Which sampling method did the town council use?

A. ~~Self-selected sampling~~
B. Simple random sampling
C. ~~Systematic sampling~~
D. Cluster sampling

$\sqrt{x}$ $\qquad$ $\dfrac{3}{x}$

if the variable is under a square root sign or in the denominator it is not a term!

22. $(4x^2+9x-3)-(x^2-11x+5)$

$4x^2+9x-3-x^2+11x-5$

1. $(-3x^2 + 2xy + 2y^2) - (-3x^2 + 7xy - 3y^2)$

$-3x^2 + 2xy + 2y^2 + 3x^2 - 7xy + 3y^2$

$-3x^2 + 3x^2 + 2xy - 7xy + 2y^2 + 3y^2$

$-5xy + 5y^2$

Multiplying polynomials:

a. $4(a^3)$

$4(1a^3)$ $= 4a^3$

b. $-3(-2n^2 - 4n - 2)$

$6n^2 + 12n + 6$

DIVIDE EACH OF THE FOLLOWING:

$$\frac{12x^2 - 16}{4}$$

$$\frac{12x^2}{4} - \frac{16}{4}$$

$$3x^2 - 4$$

b. $$\frac{-6a^2 + 18ax - 21x^2}{-3}$$

$$\frac{-6a^2}{-3} + \frac{18ax}{-3} - \frac{21x^2}{-3}$$

$$2a^2 - 6ax + 7x^2$$

Divide or multiply each of the following:

A. $(-6q^2 - 10) \div 2$

$\frac{-6q^2}{2} - \frac{10}{2}$

$-3q^2 - 5$

B. $\frac{4r^2 - 16r + 6}{-2}$

$\frac{4r^2}{-2} - \frac{16r}{-2} + \frac{6}{-2}$

$-2r^2 + 8r - 3$

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

$8x^2 - 20x + 12$

Multiply [Remember when the base is the same add the exponents!!!]

$a \times a =$
$a^1 \times a^1 = a^2$

a. $(3r)(-4r)$

$-12r^2$

B. $2x(4x - 3)$

$8x^2 - 6x$

C. $-x(-2x + 4)$

$2x^2 - 4x$

d. $-2w(2w - 6)$

$-4w^2 + 12w$

e. $6x(-2x - 5y)$

$-12x^2 - 30xy$

Dividing Polynomials: When the base is the same SUBTRACT the exponents

$$\frac{a^1}{a^1} = a^{1-1} = a^0 = 1$$

A. $\dfrac{-22m^2}{2\ m}$

$-11m$

$\dfrac{3}{3} =$

$\dfrac{6}{6} = 1$

B. $\dfrac{45a^2 - 15a}{-5a}$

$\dfrac{45a^2}{-5a} - \dfrac{15a^1}{-5a^1}$

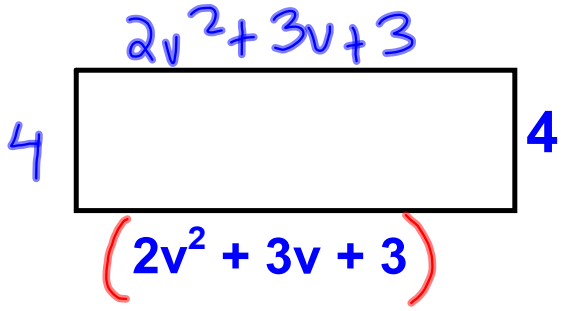
$-9a + 3a^0$

$-9a + 3$

$$\frac{24x^2 + 6xy}{3x}$$

$$\frac{24x^2}{3x} + \frac{6\cancel{x}y}{3\cancel{x}}$$

$$8x + 2y$$



A. Write an expression for the area of the rectangle.

$(2v^2+3v+3)4$

$4(2v^2+3v+3)$

$8v^2+12v+12$

B. Write an expression for the perimeter

$2v^2+2v^2+3v+3v+3+3+4+4$

$4v^2+6v+14$

13-16

23-30

Attachments

testpolynomials.doc