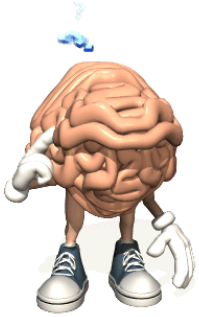


Warm Up

Factor each of the following:

1) $3x^4 - 15x^2 + 24x$

$3x(x^3 - 5x + 8)$

2) $18a^3b^6 + 27ab^2 - 36ab$

$9ab(2a^2b^5 + 3b - 4)$

3) $-21rt - 49r^4 - 35r^3t$

$-7r(3t + 7r^3 + 5r^2t)$

or

$7r(-3t - 7r^3 - 5r^2t)$

4) $6xy^2 + 7x^2y + 2y$

$y(6xy + 7x^2 + 2)$

Simplify then Factor:

1) $2x^3 - 5x + 7 + 6x^3 + x + 1$

$= 2x^3 + 6x^3 - 5x + x + 7 + 1$

$= 8x^3 - 4x + 8$

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

2) $-7n^3y - 5n^2y^3 + 2ny^2 - n^2y^3 - n^3y - 12ny$

$-8n^3y - 6n^2y^3 + 2ny^2 - 12ny$

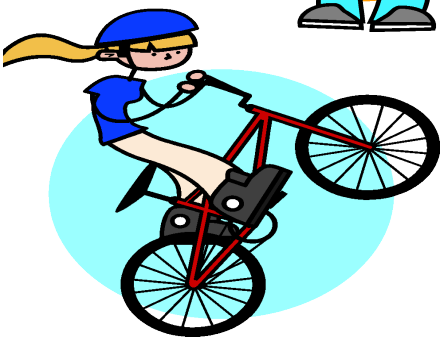
$2ny(-4n^2 - 3ny^2 + y - 6)$

Prime factorization of 120

Hint: Product of primes

Polynomials

Monomial 1 term



Binomial 2 terms

Trinomial 3 terms

How are terms separated?????

+ , −

Terms are separated by "+" and "-" signs.

How many terms?

$4x-5y+q$ 3

$5(x-3y)$ 2

$\frac{3x-4}{5}$ 2

Bonus: How many terms?

Collect like terms

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

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

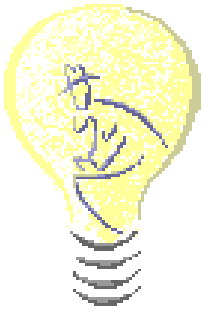
$-1x+2y$

Simplify:

$$2x - 7 + 3x^2 - 5x - 2 - 2x^2$$

$= 3x^2 - 2x^2 + 2x - 5x - 7 - 2$

$= x^2 - 3x - 9$



Distributing Factors

3.7 Multiplying Polynomials

Expand & Simplify

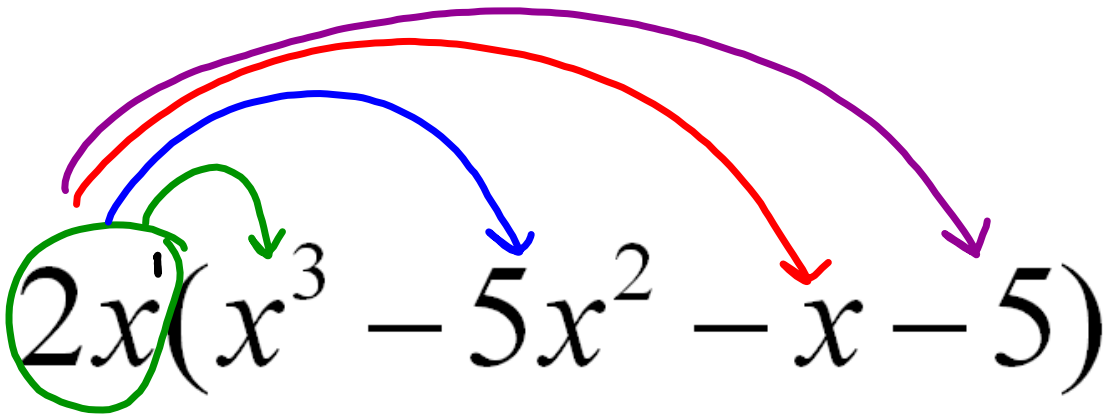
Rainbow

Expand and collect like terms.

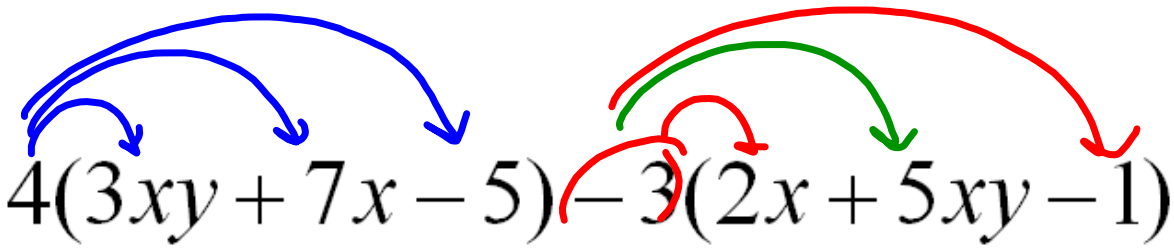
$$4(x-2)-2(x+3)$$

$= 4x - 8 - 2x - 6$

$= 2x - 14$



$2x^4 - 10x^3 - 2x^2 - 10x$



$$4(3xy+7x-5)-3(2x+5xy-1)$$

$12xy + 28x - 20 - 6x - 15xy + 3$

$-3xy + 22x - 17$

Numbers, Relations & Functions 10 Name_____

Mutilpying Polynomials

Date_____

Find each product.

1) $5(6b+3)$

2) $8(6r+3)$

3) $2(8x+y)$

4) $5mn(3m+2n)$

5) $7(x-7y)$

6) $2mn(8m-2n)$

7) $(4x-2y)(6x+6y)$

8) $(6x+3y)(4x-7y)$

9) $(2x+5y)(7x-8y)$

10) $(3x+6y)(5x-8y)$

11) $(5x-4y)(5x^2-4xy+6y^2)$

12) $(8x-7y)(6x^2+8xy+3y^2)$

13) $(6a^2-2a-3)(8a+2)$

14) $(2k^2+8k-2)(7k+4)$

15) $(7a^2-2ab+2b^2)(a^2-2ab-8b^2)$

16) $(x^2-4xy+2y^2)(x^2-2xy-7y^2)$