Warm Up

Date: Oct. 4

Quiz Tuesday

Expand and Simplify

a) $3n^4(5m^3n^2 - 10m^2n^2)$

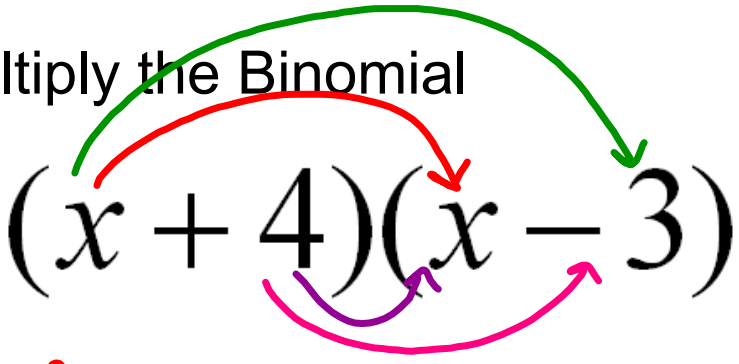
$15m^3n^5 - 30m^2n^6$

b) $2x(3x - 1) - 4(7x - 2)$

$6x^2 - 2x - 28x + 8$

$6x^2 - 30x + 8$

Multiply the Binomial



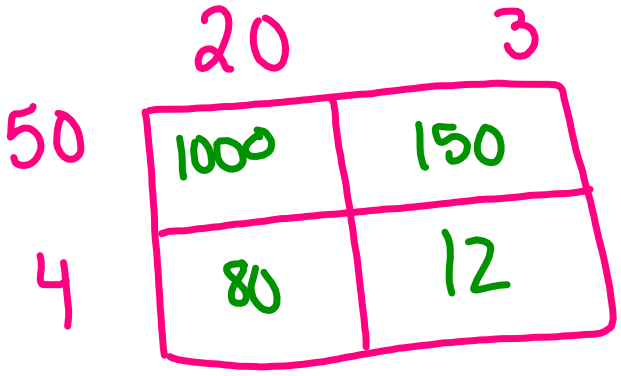
$x^2 - 3x + 4x - 12$

$x^2 + 1x - 12$

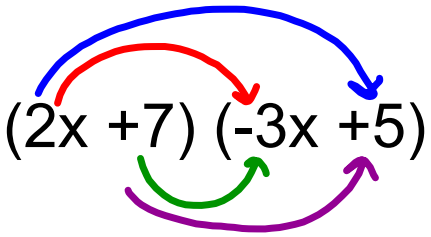
see next page for box method

Multiply 23 x 54 = 1242

by box Method (grade 5 Math)



1000
150
80
12
1242



$= -6x^2 + 10x - 21x + 35$

$= -6x^2 - 11x + 35$

$$(2x + 7)(-3x + 5)$$

	-3x	+5
2x	$-6x^2$	$10x$
+7	$-21x$	$+35$

$$-6x^2 + 10x - 21x + 35$$

$$-6x^2 - 11x + 35$$

Ultimate Question

$(2x - 2)(3x^2 - 4x + 1)$

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

$6x^3 - 14x^2 + 10x - 2$

5) $(10x^5 + 3)\ (-2x^2 - 11x + 2)$

	$-2x^2$	$-11x$	$+2$
$10x^5$			
$+3$			

Expand and simplify

means repeat bracket twice

$$(x-3)^2$$

$$= (x-3)(x-3)$$

$$= x^2 - 3x - 3x + 9$$

$$x^2 - 6x + 9$$

Expand and simplify

$$(x+2)^3$$

$$= (x+2)(x+2)(x+2)$$

Do first

$$= x^2 + 2x + 2x + 4 \quad (x+2)$$

$$= (x^2 + 4x + 4)(x+2)$$

$$= x^3 + 2x^2 + 4x^2 + 8x + 4x + 8$$

$$= x^3 + 6x^2 + 12x + 8$$

Expand and simplify

$$(x-1)^2 + (x+4)^2$$

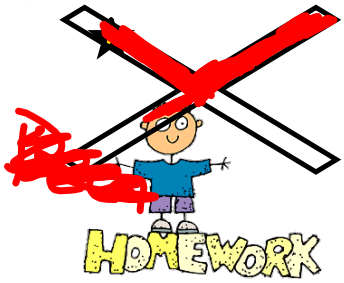
$$(x-1)(x-1) + (x+4)(x+4)$$

$$x^2 - 1x - 1x + 1 + (x^2 + 4x + 4x + 16)$$

$$x^2 - 2x + 1 + x^2 + 8x + 16$$

$$2x^2 + 6x + 17$$

Quiz Tues



1) Find the GCF of 2 numbers
2) Prime factorization (tree)
3) Factor the following (GCF out)
4) Simplify first then factor (Collect like terms then factor out GCF)
5) Expand AND simplify
6) Multiply 2 binomials (rainbow)

-18b
+9
18

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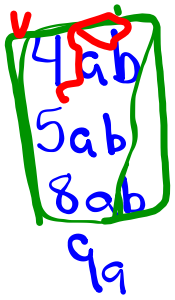
Question ~~8ab,9ab,15af,~~ ~~18ab,21ab~~



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

Answers to Mutilpying Polynomials

1) $30b + 15$
2) $48r + 24$
3) $16x + 2y$
4) $15m^2n + 10mn^2$
5) $7x - 49y$
6) $16m^2n - 4mn^2$
7) $24x^2 + 12xy - 12y^2$
8) $24x^2 - 30xy - 21y^2$
9) $14x^2 + 19xy - 40y^2$
10) $15x^2 + 6xy - 48y^2$
11) $25x^3 - 40x^2y + 46xy^2 - 24y^3$
12) $48x^3 + 22x^2y - 32xy^2 - 21y^3$
13) $48a^3 - 4a^2 - 28a - 6$
14) $14k^3 + 64k^2 + 18k - 8$
15) $7a^4 - 16a^3b - 50a^2b^2 + 12ab^3 - 16b^4$
16) $x^4 - 6x^3y + 3x^2y^2 + 24xy^3 - 14y^4$