

Warm Up

Oct. 5, 2017 .

~~Expand and Simplify~~

a) $(3n^4)(5m^3n^3) - 10m^2n^2(3n^4)$
 $15n^5m^3 - 30n^6m^2$
OR
 $15m^3n^5 - 30m^2n^6$

b) $2x(3x - 1) - 4(7x - 2)$
 $= 6x^2 - 2x - 28x + 8$
 $= 6x^2 - 30x + 8$

Multiply the Binomial

see next page
for box method

$$\begin{aligned} & (x + 4)(x - 3) \\ &= x^2 \cancel{-3x} \cancel{+4x} - 12 \\ &= x^2 + 1x - 12 \end{aligned}$$

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

	x	$+4$
x	$x \cdot x$ $= x^2$	$(4)(x)$ $= 4x$
-3	$(-3)(x)$ $= -3x$	$(-3)(+4)$ $= -12$

$$\begin{aligned} & x^2 + \underbrace{4x - 3x}_{-1x} - 12 \\ & x^2 + 1x - 12 \end{aligned}$$

$$23 \times 25$$

$$\begin{array}{r} 400 \\ 100 \\ 60 \\ \hline + 15 \\ \hline 575 \end{array}$$

20	3
20	$\begin{array}{l} 20 \times 20 \\ = 400 \end{array}$
5	$\begin{array}{l} 20 \times 3 \\ = 60 \end{array}$
	$\begin{array}{l} 5 \times 20 \\ = 100 \end{array}$
	$\begin{array}{l} 5 \times 3 \\ = 15 \end{array}$

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

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

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

$$\begin{aligned} &= -6x^2 + \cancel{10x} - \cancel{-21x} + 35 \\ &= -6x^2 - 11x + 35 \end{aligned}$$

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

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

Ultimate Question

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

$$\begin{array}{cccccc} 6x^3 & -8x^2 & +2x & -6x^2 & +8x & -2 \\ \cancel{-8x^2} & \cancel{+2x} & \cancel{-6x^2} & \cancel{+8x} & \cancel{-2} & \\ 6x^3 & -14x^2 & +10x & -2 & & \end{array}$$

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

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

Expand and simplify

repeat bracket twice

$$(x - 3)^2$$

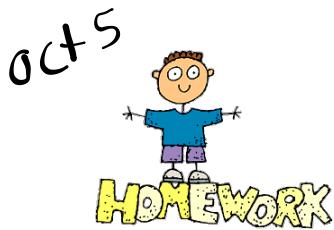
$$(x - 3)(x - 3)$$

$$x^2 \underbrace{-3x - 3x}_{x^2 - 6x} + 9$$

Expand and simplify

$$(x + 2)^3$$
$$(x+2)(x+2)(x+2)$$
$$x^2 + 2x + 2x + 4 \quad (x+2)$$
$$(x^2 + 4x + 4) \quad (x+2)$$
$$x^3 + 4x^2 + 4x + 2x^2 + 8x + 8$$

Quiz Wednesday Oct. 11



- 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)

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

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~~4ab~~
~~5ab~~
~~8ab~~
~~9a~~