

Warm Up

Oct. 5, 2017 .

Expand and Simplify

a)

$$\begin{array}{l} \overset{4}{\underbrace{3n}} \quad \overset{3}{\underbrace{(5m \ n)}} - \overset{2 \ 2}{\underbrace{10m \ n}} \\ (3n^4 \times 5m^3 n^1) - 10m^2 n^2 (3n^4) \\ 15n^5 m^3 - 30n^6 m^2 \\ \text{OR} \\ 15m^3 n^5 - 30m^2 n^6 \end{array}$$

b)

$$\begin{array}{l} (2x)(3x-1) - 4(7x-2) \\ = 6x^2 - 2x - 28x + 8 \\ = 6x^2 - 30x + 8 \end{array}$$

Multiply the Binomial

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

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

$$= x^2 + 1x - 12$$

see next page
for box method

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

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

$$x^2 + 4x - 3x - 12$$
$$x^2 + 1x - 12$$

$$23 \times 25$$

	20	3
20	$20 \times 20 = 400$	$20 \times 3 = 60$
5	$5 \times 20 = 100$	$5 \times 3 = 15$

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

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

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

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

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

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

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

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

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

$$(x - 3)^2$$

repeat
bracket
twice

The diagram shows two instances of the binomial $(x-3)$ written in orange. A black arrow curves from the x in the first bracket to the x in the second bracket. A red arrow curves from the -3 in the first bracket to the x in the second bracket. A green arrow curves from the x in the first bracket to the -3 in the second bracket. A blue arrow curves from the -3 in the first bracket to the -3 in the second bracket.

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

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

Expand and simplify

$$\begin{aligned} & (x + 2)^3 \\ & (x + 2)(x + 2)(x + 2) \\ & (x^2 + 2x + 2x + 4)(x + 2) \\ & (x^2 + 4x + 4)(x + 2) \\ & x^3 + 4x^2 + 4x + 2x^2 + 8x + 8 \end{aligned}$$

Quiz Wednesday Oct. 11

Oct 5



- 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)

Page 186-187

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

 $18b - 18$ $4ab$ $5ab$ $8ab$ $9a$