

WarmUp



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

$$= \underline{x^2} - \underline{2x} + \underline{4x} - \underline{8}$$

$$= x^2 + \underline{2x} - 8$$

$$2. (\underline{5a^3b^5c^{-3}})(\underline{10a^{-1}b^4})(\underline{2a^2b^{-1}c^2})$$

$$= \underline{100a^4b^8c^{-1}}$$

$$= \frac{100a^4b^8}{c}$$

$$3. -3m^5n^{-4}(9m^2-6n^{-5}+2)$$

$$= \underline{-27m^7n^{-4}} + \underline{18m^5n^{-9}} - \underline{6m^5n^{-4}}$$

$$= \frac{-27m^7}{n^4} + \frac{18m^5}{n^9} - \frac{6m^5}{n^4}$$

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

$$= \underline{3x^2} + \underline{12xy} - \underline{2xy} - \underline{8y^2}$$

$$= 3x^2 + \underline{10xy} - 8y^2$$



1.

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

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

$$= x^2 + 2x - 8$$



2.

$$(5a^3b^5c^{-3})(10a^{-1}b^4)(2a^2b^{-1}c^2)$$

$$= 100a^4b^8c^{-1}$$

OR

$$\frac{100a^4b^8}{c}$$



$$3. \quad -3m^5n^{-4}(9m^2-6n^{-5}+2)$$

$$= -27m^7n^{-4} + 18m^5n^{-9} - 6m^5n^{-4}$$

OR

$$\frac{-27m^7}{n^4} + \frac{18m^5}{n^9} - \frac{6m^5}{n^4}$$



4.

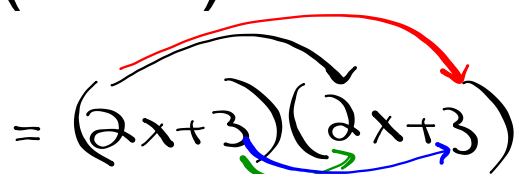
$$(3x-2y)(x+4y)$$

$$= 3x^2 + 12xy - 2xy - 8y^2$$

$$= 3x^2 + 10xy - 8y^2$$

Simplify:

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

$$= (2x+3)(2x+3)$$


$$= \underline{4x^2} + \underline{6x} + \underline{6x} + \underline{9}$$

$$\boxed{= 4x^2 + \underline{12x} + 9}$$

Try This:

$$(5x-3)^2$$

$$= (5x-3)(5x-3)$$

$$= \underline{25x^2} - \underline{15x} - \underline{15x} + \underline{9}$$

$$\boxed{= \underline{25x^2} - \underline{30x} + 9}$$

Simplify:

$$\begin{aligned}
 & 2(x+2)(x-5) \\
 &= 2(\underline{x^2} - \underline{5x} + \underline{2x} - \underline{10}) \\
 &= 2(x^2 - \underline{3x} - 10) \\
 &= \boxed{2x^2 - 6x - 20}
 \end{aligned}$$

$$\begin{aligned}
 & 2(x+2)(x-5) \\
 &= (2x+4)(x-5) \\
 &= \underline{2x^2} - \underline{10x} + \underline{4x} - \underline{20} \\
 &= \boxed{2x^2 - \underline{6x} - 20}
 \end{aligned}$$

Simplify:

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

$$= -2(\underline{6x^2} + \underline{6x} - \underline{2x} - \underline{2})$$

$$= -2(\underline{6x^2} + \underline{4x} - \underline{2})$$

$$= -12x^2 - 8x + 4$$

Try This:

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

$$= 5(\underline{6x^2} + \underline{8x} - \underline{3x} - \underline{4})$$

$$= 5(6x^2 + \underline{5x} - 4)$$

$$\boxed{= 30x^2 + 25x - 4}$$

The Ultimate!
The Ultimate!

$$(x^2 + 5x - 3)(x^2 + 3)$$
$$= \underline{x^4} + \cancel{3x^2} + \underline{5x^3} + \underline{15x} - \cancel{3x^2} - \underline{9}$$
$$= x^4 + 5x^3 + 15x - 9$$

Homework