

WarmUp



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

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

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

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

You have 10 minutes.

5. $(3x-2y)(x+4y)$



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

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



2.

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

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

OR

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

$$5 \times 10 \times 2 = 100$$

$$a^{3+(-1)+2} = a^4$$

$$b^{5+4+(-1)} = b^8$$

$$c^{-3+2} = c^{-1}$$



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

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

OR

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



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

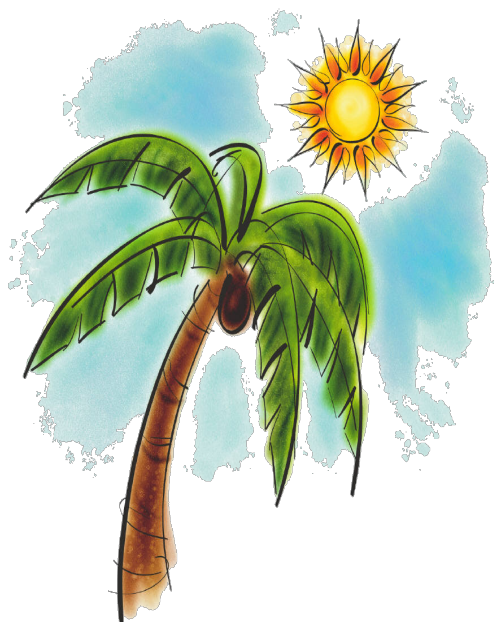
$$= 6x^2 + \underline{4x} - \underline{3x} - 2$$
$$= 6x^2 + \underline{1x} - 2$$



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

$$= 3x^2 + \underline{12xy} - \underline{2xy} - 8y^2$$
$$= 3x^2 + \underline{\underline{10xy}} - 8y^2$$

Simplify:



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

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

$$4x^2 + 6x + 6x + 9$$

$$4x^2 + 12x + 9$$

Try This!!

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

$$\begin{aligned} & (5x-3)^2 \\ & (5x-3)(5x-3) \\ & 25x^2 - \underline{15x} - \underline{15x} + 9 \\ & 25x^2 - 30x + 9 \end{aligned}$$

Simplify:



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

multiply brackets
first

$$2(x^2 - 5x + 2x - 10)$$

$$2(x^2 - 3x - 10)$$

$$\boxed{2x^2 - 6x - 20}$$

Simplify:



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

Try This!!

*Remember,
multiply the
brackets first!*



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

$$\begin{aligned} & 5(2x-1)(3x+4) \\ & 5(6x^2+8x-3x-4) \\ & 5(6x^2+5x-4) \\ & 30x^2+25x-20 \end{aligned}$$



The Ultimate!
The Ultimate!

3 terms \times 2 terms = 6 terms

$$(x^2 + 5x - 3)(x^2 + 3)$$
$$x^4 + 3x^2 + 5x^3 + 15x - 3x^2 - 9$$
$$x^4 + 5x^3 + 0x^2 + 15x - 9$$
$$x^4 + 5x^3 + 15x - 9$$