

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



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

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

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



2.

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

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

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

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



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

$$= 6x^2 + 4x - 3x - 2$$
$$= 6x^2 + 1x - 2$$

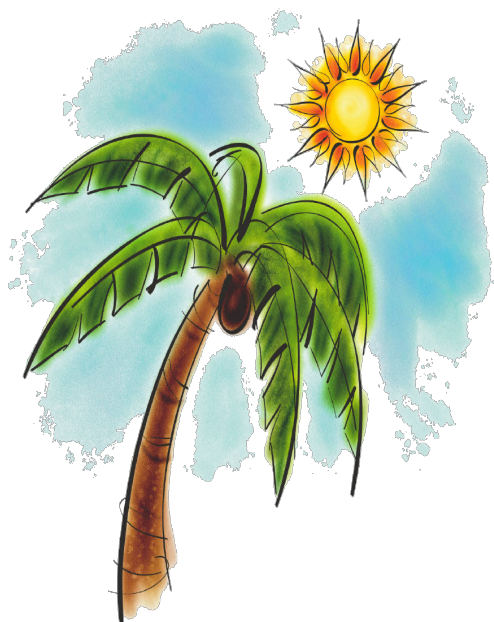


$$(3x-2y)(x+4y)$$

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

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

Simplify:



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

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

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

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

Try This!!

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

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

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

$$25x^2-15x-15x+9$$

$$25x^2-30x+9$$

Simplify:



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

$$(-6x+2)(2x+2)$$

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

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

Try This!!

*Remember,
multiply the
brackets first!*



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

$$(10x-5)(3x+4)$$

$$30x^2 + 40x - 15x - 20$$

$$30x^2 + 25x - 20$$

$$5(2x-1)(3x+4)$$
$$5(6x^2+8x-3x-4)$$
$$5(6x^2+5x-4)$$
$$30x^2+25x-20$$



The Ultimate!
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$$(x^2 + 5x - 3)(x^2 + 3)$$
$$x^4 + \underline{3x^2} + 5x^3 + 15x - \underline{3x^2} - 9$$
$$x^4 + 5x^3 + 0x^2 + 15x - 9$$
$$x^4 + 5x^3 + 15x - 9$$

Unit #1 - Day#1

Multiplying Polynomials

Find each product.

1) $7(7b+4) = 49b+28$

3) $3x^2(5x^2+6x-6) = 15x^4+18x^3-18x^2$

5) $(8a-2)(8a-6) = 64a^2 - 48a - 16a + 12$
 $= 64a^2 - 64a + 12$

7) $(5p-3)(p-1) = 5p^2 - 5p - 3p + 3$
 $= 5p^2 - 8p + 3$

9) $2u(-2u^2+5uv-8v^2) = -4u^3+10u^2v-16uv^2$

11) $(7r-4)(5r+1) = 35r^2 + 7r - 20r - 4$
 $= 35r^2 - 13r - 4$

13) $(4n-2)(2n-8) = 8n^2 - 32n - 4n + 16$
 $= 8n^2 - 36n + 16$

15) $(8v+1)(6v+8) = 48v^2 + 64v + 6v + 8$
 $= 48v^2 + 70v + 8$

2) $5v^4(2v^2+4v+8) = 10v^6+20v^5+40v^4$

4) $6m^2(6m^2+8mn+5n^2) = 36m^4+48m^3n+30m^2n^2$

6) $(2k+3)(7k+7) = 14k^2+14k+21k+21$
 $= 14k^2+35k+21$

8) $-2x(-x^2+4xy-5y^2) = 2x^3-8x^2y+10xy^2$

10) $4y(7x+7y) = 28xy+28y^2$

12) $(7x+2)(5x-3) = 35x^2-21x+10x-6$
 $= 35x^2-11x-6$

14) $(6b-5)(8b-4) = 48b^2-24b-40b+20$
 $= 48b^2-64b+20$

16) $(3x-2)(5x+4) = 15x^2+12x-10x-8$
 $= 15x^2+2x-8$