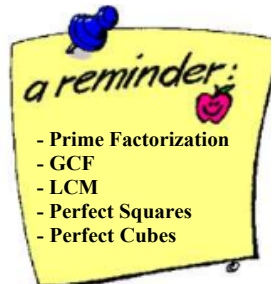





Don't forget about me!!



1. If the surface area of a cube is 2646 cm^2 , what is the volume?
2. Kayla's milk man comes every 9 days to deliver milk, and Mallory's comes every 12 days. Suppose both girls got milk delivered today. How many days will pass before both girls will have milk delivered on the same day?

3. Calculate the area  $(x - 2)$ $(2x^2 - 4x - 3)$

4. Simplify: $5x^3y^4z(3x^2y^3z^2 - 7y^4z + 3)$

5. Find the greatest common factor of 220, 308, 484

1. If the surface area of a cube is 2646 cm^2 , what is the volume?

$$SA = 6(l \times w)$$

$$\text{Side} = 21 \text{ cm}$$

$$2646 \div 6 = 441$$

$$V = l \times w \times h$$

$$A = 441$$

$$V = 21 \times 21 \times 21$$

$$A = l \times w$$

$$V = 9261 \text{ cm}^3$$

$$441 \rightarrow (3 \times 3) \times (7 \times 7)$$
$$(3 \times 7)(3 \times 7)$$
$$21 \times 21$$

2. Kayla's milk man comes every 9 days to deliver milk, and Mallory's comes every 12 days. Suppose both girls got milk delivered today. How many days will pass before both girls will have milk delivered on the same day?

LCM

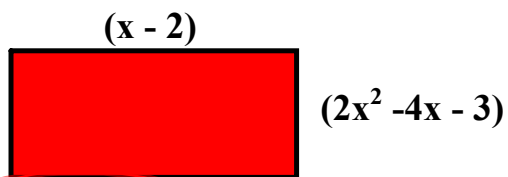
$$9 \rightarrow 3 \times 3 \rightarrow 3^2$$

$$12 \rightarrow 2 \times 2 \times 3 \rightarrow 2^2 \times 3^1$$

$$2^2 \times 3^2$$

$$4 \times 9 = 36 \text{ days}$$

3. Calculate the area



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

Try This!!

Simplify:

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

b) $(2x - 8)(5x^2 - x + 2)$

4. Simplify: $5x^3y^4z(3x^2y^3z^2 - 7y^4z + 3)$

$$15x^5y^7z^3 - 35x^3y^8z^2 + 15x^3y^4z$$

5. Find the greatest common factor of 220, 308, 484

$$\begin{aligned} 220 &\rightarrow 2 \times 2 \times 5 \times 11 \\ 308 &\rightarrow 2 \times 2 \times 7 \times 11 \\ 484 &\rightarrow 2 \times 2 \times 11 \times 11 \end{aligned}$$

$$2 \times 2 \times 11 = 44$$

Substitution

Factor the following trinomial and substitute $x = 2$

$$x^2 - 2x - 63$$

$$(x-9)(x+7)$$
$$(\underline{2}-9)(\underline{2}+7)$$

$$7 \times 9$$
$$= 63$$

$$\underline{-9} \times \underline{7} = -63$$
$$\underline{-9} + \underline{7} = -2$$

Factor the following trinomial and substitute $x = 3$ and $y = 2$

$$4x^2 - 8xy + 3y^2$$

$-\frac{6}{2}x - 2 = 12$
 $-\frac{6}{2} + 2 = -8$

$$4x^2 - 2xy \quad -6xy + 3y^2$$

$$2x(2x - y) \quad -3y(2x - y)$$

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

$$\left(\begin{array}{l} 2(3) - 3(2) \\ (6 - 6) \\ (0) \times (4) \end{array} \right) \left(\begin{array}{l} 2(3) - 2 \\ (6 - 2) \end{array} \right)$$

$$= 0$$

Factor the following polynomial and substitute $x = 1$ & $y = 4$

$$3x^2y^2 + 12xy$$

$$3xy(xy + 4)$$

$$3(1)(4) [(1)(4) + 4]$$

$$12(4 + 4)$$

$$12(8)$$

$$= 96$$