

1) Find the **sum**:

$$(3x^3 + 2x^2 - 8) + (-5x^2 + 3x - 2)$$

C.L.T.

Put in S.F.

$$3x^3 - 3x^2 + 3x - 10$$

Find the **product**:

$$3) (3x-1)(2x+7)$$

Box/Area

D.P./FOIL

Horizontal

Vertical

$$6x^2 + 21x - 2x - 7$$

$$6x^2 + 19x - 7$$

$$5) (5x-1)^2 \text{ "Twin" or write twice?}$$

$$25x^2 - 10x + 1$$

7) What is the **greatest common factor**?

$$6x^2y^3 - 3xy^2 + 12x^4y^5$$

$$xxxyy \quad xyy \quad xxxxyyyy$$

$$3xy^2$$

Write in **factored form**:

8) $12x^2 + 30x + 18$

① Goal?

② S.F.?

③ G.C.F.?

Bi or Tri?

$$6(2x+3)(x+1)$$

9) $5x^2 - 625$

$$5(x^2 - 125)$$

↑
can't

D.U.T.S.

2) Find the **difference**:

Distribute 1st

$$(3x^3 + 2x^2 - 8) - (-5x^2 + 3x - 2)$$

C.L.T.

$$+ 5x^2 - 3x + 2$$

$$3x^3 + 7x^2 - 3x - 6$$

4) $(8x-3)(3x^2+4x-6)$

$$24x^3 + 23x^2 - 60x + 18$$

8x	3x ²	4x	-6
-3			

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

monomial

just distribute

$$-6x^7 + 2x^6 - 8x^5$$

10) $x^2 + 2x - 15$

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

Find the **solution set**:

Same ?s
to
start,

11) $16x^2 - 8x = -1$

$$(4x-1)^2 = 0$$

$\left(\frac{1}{4}\right)$ okay if
written twice

13) What are the **roots**?

$$(2x+1)(x-2) = 0$$

$$\left[-\frac{1}{2}, 2\right]$$

12) $4x^2 + 4x - 24 = 0$

$$4(x+3)(x-2) = 0$$

$$[-3, 2]$$

14) Can this **trinomial** be written as a **perfect square binomial**?

$$x^2 + 14x + 49$$

$$\frac{14x}{2} = 7x \text{ Yes!}$$

$$(x+7)^2$$

15) Solve: $30 = (x+5)(x-2)$

$$30 = x^2 + 3x - 10$$

$$0 = x^2 + 3x - 40$$

$$0 = (x+8)(x-5)$$

$$[-5, 8]$$