

Mathematics 10D

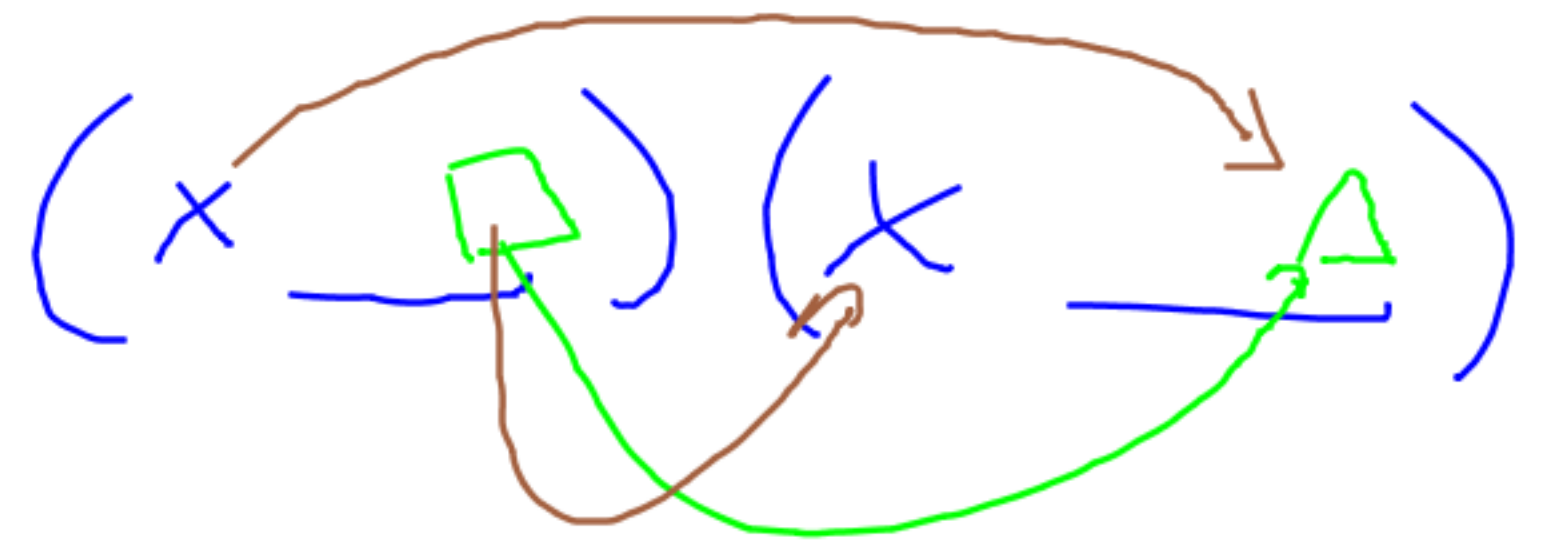
4.3 – Factoring x^2+bx+c

Mr. D. Hagen

$$1) x^2 + 15x + 54$$

$$= (x + 9)(x + 6)$$

$\otimes 54$
 $\oplus 15$
 $9, 6$



$$2) x^2 - x - 72$$

$$= (x + 8)(x - 9)$$

$\otimes -72$
 $\oplus -1$

$$+ 8, - 9$$

$$3) 4x^2 + 16x - 240$$

$$= 4(x^2 + 4x - 60)$$

$$\textcircled{x} -60$$

$$\textcircled{+} 4$$

$$+10, -6$$

$$= 4(x+10)(x-6)$$

$$1, 60$$

$$2, 30$$

$$3, 20$$

$$4, 15$$

$$5, 12$$

$$6, 10$$

$$4) 6x^2 - 78x + 180$$

$$\textcircled{x} 30$$

$$\textcircled{+} -13$$

$$-3, -10$$

$$= 6(x^2 - 13x + 30)$$

magic step

$$= 6(x-3)(x-10)$$