

FACTORIZING TRINOMIALS IN THE FORM $x^2 + bx + c$

- WE USE THE "CARRY" METHOD

STEPS

① YOU MUST FACTOR OUT ANYTHING YOU CAN BEFORE YOU START

② WRITE TWO BRACKETS () ()

③ IN THE FIRST SLOT OF EACH BRACKET WRITE THE ROOT OF THE FIRST TERM (USUALLY A VARIABLE)

④ LOOK AT THE LAST SIGN OF THE EXPRESSION, DETERMINE WHAT SIGNS MULTIPLY TO GIVE YOU

THE CORRECT SIGN

(5) FIND TWO CONSTANTS (SOMEONES VARIABLES)

WHICH MULTIPLY TO GIVE YOU THE LAST TERM

AND ADD UP TO THE MIDDLE TERM.

THE FACTOR $x^2 + 7x + 12$

$$(x + 3)(x + 4)$$

CHECK $x^2 + 4x + 3x + 12$

$$x^2 + 7x + 12$$

-12

THE FACTOR $t^2 + 4t - 12$

$$(t + 6)(t - 2)$$

	-12	1	-11
-1	12	11	
-6	2	-4	

-2 6 44

DE Factor $2x^2 + 16xy - 72y^2$

$$2(x^2 + 8xy - 36y^2)$$

$$2(x + 9y)(x - 4y)$$

$$x^2 - 4xy + 9xy - 36y^2$$

$$x^2 + 5xy - 36y^2$$

-36

$$\frac{-4}{-4} \quad \frac{6}{6} = 0$$

$$\frac{-11}{-11} \quad \frac{2}{2} = -16$$

$$\frac{=3}{=3} \quad \frac{12}{12} = 9$$

$$\frac{-4}{-4} \quad \frac{9}{9} = 5$$

H/W Pg 234

4, 5 ALL

9,10 A.C