

FACTORIZING TRINOMIALS OF THE FORM $ax^2 + b f(x) + c$

$$(\text{ALSO } ax^2 + b f(x)^2 - b^2 + f(x)^2)$$

— WHEN FACTORIZING IN THE FORM $ax^2 + b f(x) + c$

ALL THE SAME RULES APPLY. HINT - TRY TO

REWRITE THE EXPRESSION IN THE FORM $ax^2 + bx + c$.

— THE EASIEST IS TO REPLACE FUNCTIONS (IE $f(x)$)

WITH u , FACTOR AND THEN SUBSTITUTE BACK.

$$* (\sin x)^2 = \sin^2 x, \quad \cos x^2 = \cos^2 x \quad *$$

IE FACTOR $3 \sin^2 x - 10 \sin x + 8$

Solve CAN YOU FACTOR $3x^2 - 10x + 8$?

$$\sqrt{3x^2 - 10x + 8}$$

$$\begin{array}{r|l} 24 & \\ -12 & -2 = -14 \\ 12 & 2 = 14 \\ -6 & 4 = -10 \end{array}$$

$$3x^2 - 10x + 8$$

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

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

$$(5x-2)(35x-4)$$

BE FACTOR $6(3x+1)^2 + 17(3x+1) + 12$

Solve

$$\sqrt{6x^2 + 17x + 12}$$

$$6x^2 + 9x + 5x + 12$$

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

$$\begin{aligned}
 & (2x+3)(3x+4) \\
 & (2(3x+1)+3)(3(3x+1)+4) \\
 & (6x+2+3)(9x+3+4) \\
 & (6x+5)(9x+7)
 \end{aligned}$$

DE $60x^2y^2 - 15x^4y^4 \Rightarrow 60x - 15x^2$

$$15x^2y^2(4 - x^2y^2)$$

$$x = x^2y^2 \downarrow$$

$$15x(4-x)$$

$$15x^2y^2(2+xy)(2-xy)$$

$$15x^2y^2(4-x^2y^2)$$

H/w Pg 244

1-b / ST + LAST

Re 251 # 1, 3-5 A, C, E...
#6, 7 ALL