

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

Note Title

2/6/2012

$$(a \sin^2 x + b \sin x + c)$$

- WHEN FACTORING IN THE FORM $a f(x)^2 + b f(x) + c$

ALL THE SAME RULES APPLY. HINT - TRY TO

REWRITE THE EXPRESSION IN THE FORM $a x^2 + b x + c$

- THE EASIEST IS TO REPLACE FUNCTIONS (π $f(x)$)

WITH x , Factor AND THEN SUBSTITUTE BACK.

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

Ex Factor $3 \sin^2 x - 10 \sin x + 8$

Solve

can you factor $3x^2 - 10x + 8$?

$$\begin{array}{r} \sqrt{3x^2 - 10x + 8} \\ -12 \end{array}$$

$$-2 = -14$$

$$12 \quad | \quad 2 = 14$$

$$-6 \quad | \quad -4 = -10$$

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

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

$$(5x-2)(3x-4)$$

TE Factor $6(\underbrace{3x+1}_6)^2 + 17(3x+1) + 12$

$$\$6x$$

$$(6x^2 + 9x) + 8x + 12$$

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

$$(2x+3)(3x+4) \\ (\overbrace{2(3x+1)}^{\text{TE}} + 3)(\overbrace{3(3x+1)}^{\text{TE}} + 4) \\ (6x+2+3)(9x+3+4) \\ (6x+5)(9x+7)$$

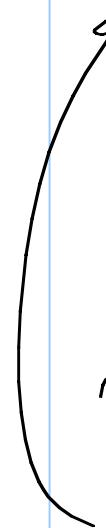
TE

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

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

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

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



$$\frac{H}{\omega} \not\in \mathbb{Z}_{44} \\ \# 1-b \mid \tau + \text{LAST}$$

21/ # / 3-5 A, C, E . . .

#6, 7 All