

ACHA 3000 Introduction to Math

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3.)

$$(iv) x^2 - 64 = 0 \Rightarrow x^2 - (8)^2 = 0 -$$

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

$$(x+8) = 0 \Rightarrow x = -8$$

$$(x-8) = 0 \Rightarrow x = 8$$

$$(v) \underset{x}{2x^2} + \underset{5}{9x} + \underset{2}{10} = 0 \Rightarrow (2x+5)(x+2) = 0$$

$$(2x+5) = 0 \Rightarrow 2x = -5$$

$$x = -\frac{5}{2}$$

$$(x+2) = 0 \Rightarrow x = -2$$

$$4.) \quad 14x^2 + 3x = 11 \Rightarrow 14x^2 + 3x - 11 = 0$$

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \Rightarrow x = \frac{-3 \pm \sqrt{(3)^2 - 4(14)(-11)}}{2 \cdot 14}$$

$$x = \frac{-3 \pm \sqrt{9 + 616}}{28} = \frac{-3 \pm \sqrt{625}}{28}$$

$$x = \frac{-3 + 25}{28} = \frac{22}{28} = \frac{11}{14} //$$

$$x = \frac{-3 - 25}{28} = \frac{-28}{28} = -1 //$$

$$5-) \quad 5x + 3y = 39 \quad (2)$$

$$10x + 6y = 78$$

$$8x - 2y = 42 \quad (3)$$

$$28x - 6y = 126$$

$$34x = 204$$

$$x = 6 //$$