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ACHC3000

8 i) $x^2 + 10x + 21 = 0$

$$(x+7)(x+3) = 0$$

$$x^2 + 3x + 7x + 21 = 0$$

$$x^2 + 10x + 21 = 0$$

$$x+7 = 0$$

$$x = 0 - 7$$

$$x = -7$$

$$x+3 = 0$$

$$x = 0 - 3$$

$$x = -3$$

ii) $x^2 - 3x + 2 = 0$
 $(x-2)(x-1) = 0$

~~$$x^2 - 1x - 2x + 2 = 0$$~~

$$x^2 - 1x - 2x + 2 = 0$$

$$x^2 - 3x + 2 = 0$$

$$x-2 = 0$$

$$x = 0 + 2$$

$$x = 2$$

$$x-1 = 0$$

$$x = 0 + 1$$

$$x = 1$$

iii) $x^2 + 12x + 20 = 0$
 $(x+10)(x+2) = 0$

$$x^2 + 2x + 10x + 20 = 0$$

$$x^2 + 12x + 20 = 0$$

$$x+10 = 0$$

$$x = 0 - 10$$

$$x = -10$$

$$x+2 = 0$$

$$x = 0 - 2$$

$$x = -2$$

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

$$x^2 + 8x - 8x - 64 = 0$$

$$x^2 - 64 = 0$$

$$x+8 = 0$$

$$x = 0 - 8$$

$$x = -8$$

$$x-8 = 0$$

$$x = 0 + 8$$

$$x = 8$$

$$\sqrt{64} = 8$$

$$+ 8x - 8x$$

$$= -64$$