

Adam Evans 2005959

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$$d) i) x^2 + 11x + 30 = 0$$

$$\begin{array}{cc} \uparrow & \uparrow \\ + & \times \end{array}$$

$$3 \times 10 = 30 \quad \times$$

$$10 \times 3 = 30 \quad \times$$

$$5 \times 6 = 30 = 11$$

$$6 \times 5 = 30 = 11$$

$$(x + 5)(x + 6) = 0$$

$$x^2 + 6x + 5x + 30$$

$$x^2 + 11x + 30 \quad \checkmark$$

$$x + 5 = 0$$

$$x = -5$$

$$x + 6 = 0$$

$$x = -6$$

$$ii) x^2 + 13x + 22 = 0$$

$$2 \times 11 = 22 = 13$$

$$11 \times 2 = 22 = 13$$

$$(x + 2)(x + 11) = 0$$

$$x^2 + 11x + 2x + 22 \quad \checkmark$$

$$x + 2 = 0$$

$$x = -2$$

$$x + 11 = 0$$

$$x = -11$$

$$iii) x^2 + 100 = 0$$

$$x + 10 = 0$$

$$x + 10 = 0$$

$$x = -10$$

$$x = -10$$

$$iv) 2x^2 + 7x + 5 = 0$$