

$$b) \frac{1}{9x^2} - \frac{1}{9} = 0$$

$$\frac{9 - 9x^2}{36x^2} = 0$$

$$9 - 9x^2 = 0$$

$$x^2 = \frac{9}{9}$$

$$x = \frac{3}{2} \vee x = -\frac{3}{2}$$

$$b) \frac{x(6-x)}{2} = 2+x \quad | \cdot 2$$

$$6x - x^2 = 4 + 2x$$

$$4x - x^2 - 4 = 0$$

$$\Delta = 16 - 16$$

$$\Delta = 0$$

$$x = 2$$

$$d) x^2 + 64 = 16x$$

$$x^2 - 16x + 64 = 0$$

$$\Delta = 256 - 256$$

$$\Delta = 0$$

$$x = 8$$

$$i) (x-3)(x-2) = 7x - 30$$

$$x^2 - 2x - 3x + 6 = 7x - 30$$

$$x^2 - 12x + 36 = 0$$

$$\Delta = 144 - 144$$

$$\Delta = 0$$

$$x = 6$$

$$e) 24x - x^2 = 144$$

$$-x^2 + 24x - 144$$

$$\Delta = 576 - 576 = 0$$

$$x = 12$$

$$f) 1 + 9x^2 + 6x = 0$$

$$\Delta = 36 - 36 = 0$$

$$x = \frac{-6}{18} = \underline{\underline{-\frac{1}{3}}}$$

$$g) x^2 = 1 - x^2$$

$$x^2 = 1$$

$$x = 1 \vee x = -1$$