find the zero of the polynomial $2x - 3$.

Soln:

$$p(x) = 2x - 3$$

Let $p(x) = 0$

$$2x - 3 = 0$$

$$\Rightarrow 2x = 3$$

$$\boxed{x = \frac{3}{2}}$$

H.W find the zero of $4x + 5$

Probl: find the zero of the polynomial $2x^2 - 8x + 6$

Soln:

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

$$a x^2 + b x + c$$

$$2x^2 - 8x + 6$$

$$a = 2 \quad b = -8 \quad c = 6$$

$$x = \frac{-(-8) \pm \sqrt{(-8)^2 - 4(2)(6)}}{2(2)}$$

$$= \frac{8 \pm \sqrt{64 - 48}}{4}$$

$$= \frac{8 \pm \sqrt{16}}{4}$$

$$= \frac{8 \pm 4}{4}$$

$$\begin{array}{r} -8 \\ -8 \\ \hline 64 \end{array}$$

$$\begin{array}{r} 64 \\ -48 \\ \hline 16 \end{array}$$

$$= \frac{8+4}{4} \;,\; \frac{8-4}{4}$$

$$= \frac{\cancel{12}^{3}}{\cancel{4}} \;,\; \frac{\cancel{4}}{\cancel{4}}$$

$$= 3, 1$$

Zeroes of $2x^2 - 8x + 6$ are 3 and 1.

There is an easier way to find out