

Equations that are quadratic in form
 Try to see the "u" in $2u^2 + bu + c = 0$

$$\left(\frac{2c-3}{5}\right)^2 + 2\left(\frac{2c-3}{5}\right) = 8$$

This is quadratic in the variable $\frac{2c-3}{5}$.

$$u^2 + 2u = 8, \text{ if you let } u = \frac{2c-3}{5}$$

$$u^2 + 2u + 1 = 8 + 1$$

$$(u+1)^2 = 9$$

$$u+1 = \pm 3 \quad \begin{matrix} \nearrow 2=4 \\ \searrow -4=4 \end{matrix}$$

$$u = -1 \pm 3$$

$$u = \frac{2c-3}{5} = 2$$

Clear Fractions way

$$\left(\frac{2c-3}{5} = 2\right)(5)$$

$$\frac{2c-3}{5} = \frac{2}{1} \cdot \frac{5}{5}$$

$$\frac{2c-3}{5} = \frac{10}{5}$$

$$2c-3 = 10$$

$$2c = 13$$

$$c = \frac{13}{2}$$

$$\frac{2c-3}{5} = 4, \text{ etc.}$$

More general
 to put every-
 thing over
 same denominator