

November 30th

**One root of a quadratic equation is  $5 + 2\sqrt{6}$ .**

The other root is  $5 - 2\sqrt{6}$

If the two roots are  $\alpha$  and  $\beta$

$$a + b = 10$$

$$ab = 25 - 24 = 1$$

Therefore the equation is

$$\mathbf{x^2 - 10x + 1 = 0}$$

(This uses the fact that if the roots of a quadratic equation are  $\alpha$  and  $\beta$ , then the equation is

$$x^2 - (\alpha + \beta)x + \alpha\beta = 0 \quad )$$