3. Find the quadratic equations that have the following pairs of roots (r_1, r_2).

(iv) $(\sqrt{5}, 4)$

$X^2 - (4+\sqrt{5})X + 4\sqrt{5} = 0$

Remember...

$X^2 - (\text{Sum of Roots})X + (\text{Product of Roots}) = 0$

(viii) $\left(\frac{5}{2}, \frac{3}{5}\right)$

$X^2 - \left(\frac{5}{2} + \frac{3}{5}\right)X + \left(\frac{5}{2}\right)\left(\frac{3}{5}\right) = 0$

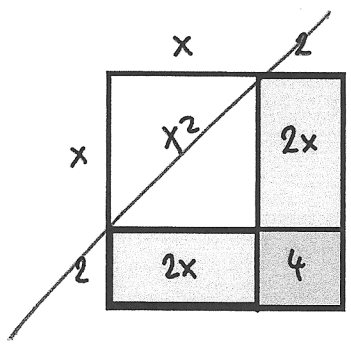
$X^2 - \left(\frac{25+6}{10}\right)X + \frac{15}{10} = 0$

$10X^2 - 31X + 15 = 0$

Section 2.6 Max and Min of Quadratic graphs

3. Write each of the following in the form $(x-p)^2 + q = 0$.

(i) $x^2 + 4x - 6 = 0$



$X^2 + 4X + 4 - 6 - 4 = 0$

$(X+2)^2 - 10 = 0$

factorise like normal, however you do it