

Solution of Equations and Graph Sketching 1

1) Find the roots (the value of x that makes the expression zero) of

a. $\frac{x-2}{3x-10}$

b. $\frac{x}{4} - \frac{2x}{5} - \frac{3}{5}$

2) Factorise the expression $x^2 - 2x - 8$ and hence find its roots

3) Use the formula to solve the equation $10x^2 = 9x - 2$

4) Sketch the graphs on the same axes and also find algebraically the point of intersection when the vertical line at $x=-2$ meets the curve. Label the regions in the graph.

$$y = x^2 + 2x - 3$$

5) Sketch the graphs on the same axes and also find algebraically the points of intersection when the straight line with equation,

$$y = \frac{3}{4}x - \frac{3}{2} \quad \text{meets the curve} \quad y = x^2 + 2x - 3$$