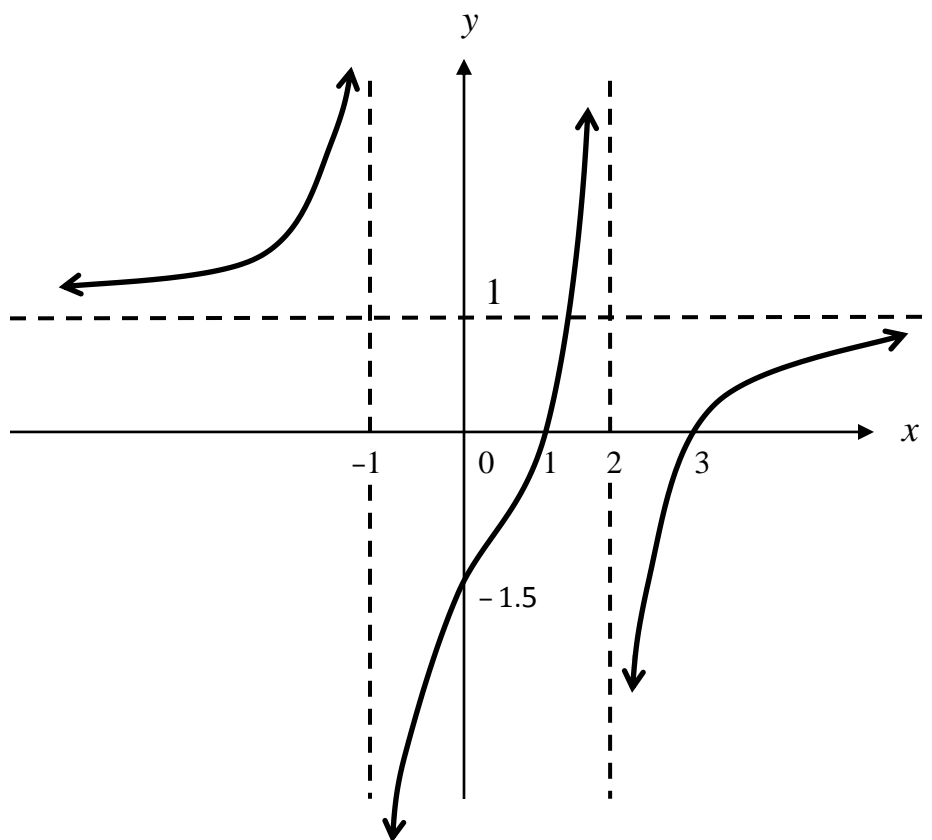# Worksheet 5
Year 13 Mathematics

Write the answers in your Exercise Book.

Study the **balanced** function shown below and then answer the questions that follow.

(a)   What are the coordinates of the **x-intercepts**?   **(1 mark)**

(b)   What are the coordinates of the **y-intercept**?   **(½ mark)**

(c)   State the equations of the **vertical** asymptotes.   **(1 mark)**

(d)   State the equation of the **horizontal** asymptote.   **(½ mark)**

(e)   The graph has the equation of the form

$$y = \frac{(x-a)(x-b)}{(x+c)(x-d)}$$

   Find the values of a, b, c and d.   **(2 marks)**