

Figure 4

(a) Figure 4 shows a sketch of the curve with equation y = f(x), where

$$f(x) = \frac{x^2 - 5}{3 - x}, \quad x \in \mathbb{R}, \ x \neq 3$$

The curve has a minimum at the point A, with x-coordinate  $\alpha$ , and a maximum at the point B, with x-coordinate  $\beta$ .

Find the value of  $\alpha$ , the value of  $\beta$  and the y-coordinates of the points A and B.

(5)