





















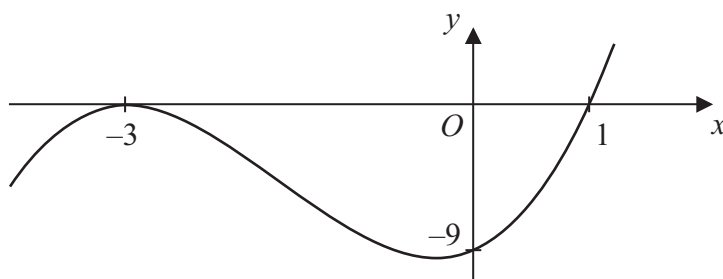








8.



**Figure 1**

Figure 1 shows a sketch of the curve with equation  $y = f(x)$  where

$$f(x) = (x + 3)^2 (x - 1), \quad x \in \mathbb{R}.$$

The curve crosses the  $x$ -axis at  $(1, 0)$ , touches it at  $(-3, 0)$  and crosses the  $y$ -axis at  $(0, -9)$

- (a) In the space below, sketch the curve  $C$  with equation  $y = f(x + 2)$  and state the coordinates of the points where the curve  $C$  meets the  $x$ -axis. **(3)**
- (b) Write down an equation of the curve  $C$ . **(1)**
- (c) Use your answer to part (b) to find the coordinates of the point where the curve  $C$  meets the  $y$ -axis. **(2)**









**Question 8 continued**

**Q8**

**(Total 6 marks)**

























