1. Find the equation of the line through the point $(-1, 4)$ which is parallel to the line with Equation $3x - y + 2 = 0$ **(3)**
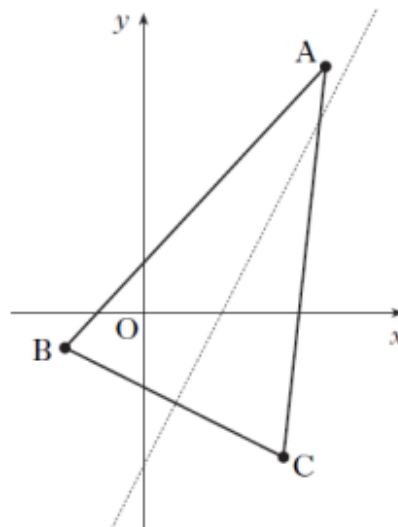
2. Functions f and g, defined on suitable domains, are given by $f(x) = x^2 + 1$ and $g(x) = 1 - 2x$.

   Find

   (a) $g(f(x))$
   (b) $g(g(x))$ **(4)**

3. The vertices of triangle ABC are $A(7, 9), B(-3, -1)$ and $C(5, -5)$ as shown in the diagram.
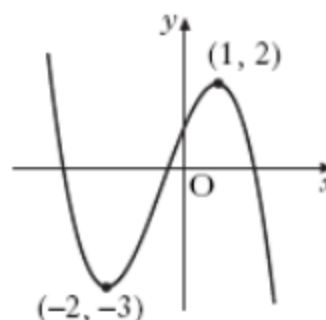   The broken line represents the perpendicular bisector of BC.

   (a) Show that the equation of the perpendicular bisector of BC is $y = 2x - 5$. **(4)**

   (b) Find the equation of the median from C. **(3)**

   (b) Find the coordinates of the point of intersection of the perpendicular bisector of BC and the median from C. **(3)**

4. The diagram shows the graph of $y = f(x)$

   Sketch and annotate the graph of $y = f(x + 2) - 1$

(1, 2)

(−2, −3)

(3)