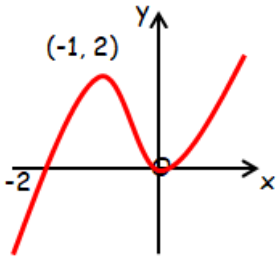
Name:	Date:
Question 1: A function is given by $h(x) = x^3 - 1$. Find the inverse function $h^{-1}(x)$.	3·3 Outcome 1
Question 2: Calculate the length of the line joining the points (-3, 1) and (2, -8).	1·4 Outcome 1
Question 3: A line has a midpoint of (-1, 2). One of the end points on the line is (4, 11). What are the coordinates of the other end point?	1·5 Gold Outcome 3
Question 4: This diagram shows the graph of y = f(x).  Sketch the graph of y = -f(x – 2).	4·1 Gold Outcome 3
Question 5: Are the points K(2, 5), L(3, 8) and M(8, 23) collinear? Give a reason for your answer!	1·7 Outcome 1
My score:	

Exam Questions

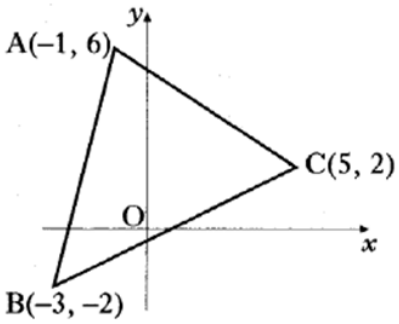
Question 1:

A function f, defined on a suitable domain, is given by $f(x) = \frac{6x}{x^2 + 6x - 16}$.

What restrictions are there on the domain of f? 2

Question 2:

Triangle ABC has vertices A(–1, 6), B(–3, –2) and C(5, 2).



Find

(a) the equation of the line p, the median from C of triangle ABC. 3

(b) the equation of the line q, the perpendicular bisector of BC. 4

(c) the coordinates of the point of intersection of the lines p and q. 1

Question 3:

Functions f and g, defined on suitable domains, are given by $f(x) = x^2 + 1$ and $g(x) = 1 - 2x$.

Find:

(a) $g(f(x))$; 2

(b) $g(g(x))$. 2

My score: