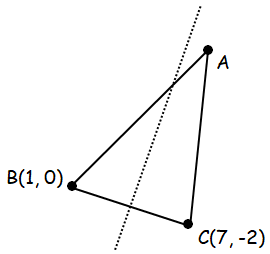
Name:	Date:
Question 1: A function is given by f(x) = 2x - 7. Find the inverse function $f^{-1}(x)$.	3·3 Outcome 1
Question 2: For what values of x is the function $y = 6x^2 + 4x + 5$ decreasing?	6·4 Silver Outcome 2
Question 3: Find the equation of the straight line which is parallel to the line with equation $7y = 4x + 11$ and which passes through the point $(1, 5)$.	1·6 Bronze Outcome 1
Question 4: Triangle ABC is shown in the diagram. The broken line is the perpendicular bisector of BC.  (a) Find the equation of the perpendicular bisector of BC. (b) The line AB makes an angle of 45° with the positive direction of the x-axis. Find the equation of AB. (c) Find the coordinates of the point of intersection of these two lines.	1·8 Gold Outcome 3 1·3 Gold Outcome 3 1·9 Silver Outcome 2
Question 5: Differentiate with respect to x. $$f(x) = \frac{x^5 + 4}{\sqrt{x}}$$	6·1 Gold Outcome 3
My score:	

Exam Questions

Question 1:

Find the coordinates of the turning points of the curve with equation $y = x^3 - 3x^2 - 9x + 12$ and determine their nature. 8

Question 2:

Express $2x^2 + 12x + 1$ in the form $a(x + b)^2 + c$. 3

Question 3:

A curve, for which $\frac{dy}{dx} = 6x^2 - 2x$, passes through the point $(-1, 2)$.

Express y in terms of x. 4

My score: