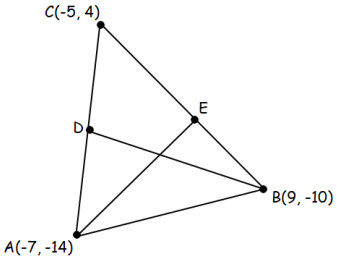
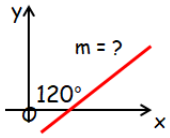
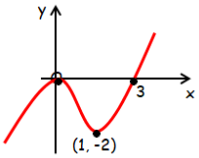
Name:	Date:
Question 1: Triangle ABC has vertices A(-7, -14), B(9, -10) and C(-5, 4).  (a) Find the equation of the median BD. (b) Find the equation of the altitude AE. (c) Find the coordinates of the point of intersection of BD and AE.	1·8 Bronze Outcome 1 1·8 Silver Outcome 2 1·9 Gold Outcome 3
Question 2: Two functions are defined as $f(x) = x^2 - 2$ and $g(x) = 3x + 1$. Calculate $f(g(2))$.	3·2 Bronze Outcome 1
Question 3: Find the coordinates of the stationary points of the curve with equation $y = x^3 + 3x^2 - 9x + 7$ and determine their nature. 	6·5 Bronze Outcome 1 6·5 Silver Outcome 2
Question 3: Calculate the gradient of the line below without a calculator!  	1·3 Gold Outcome 3
Question 5: The graph of $y = f(x)$ is shown below.  Sketch the graph of $y = f'(x)$.	6·4 Gold Outcome 3
My score:	

Exam Questions

Question 1:

Find the equation of the line which passes through the point $(-1, 3)$ and is perpendicular to the line with equation $4x + y - 1 = 0$. **3**

Question 2:

Functions f and g are given by $f(x) = 3x + 1$ and $g(x) = x^2 - 2$.

(a) (i) Find $p(x)$ where $p(x) = f(g(x))$.

(ii) Find $q(x)$ where $q(x) = g(f(x))$. **3**

(b) Solve $p'(x) = q'(x)$. **3**

Question 3:

The point P$(-1, 7)$ lies on the curve with equation $y = 5x^2 + 2$. Find the equation of the tangent to the curve at P. **(4)**

My score: