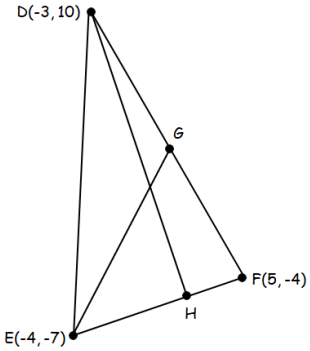
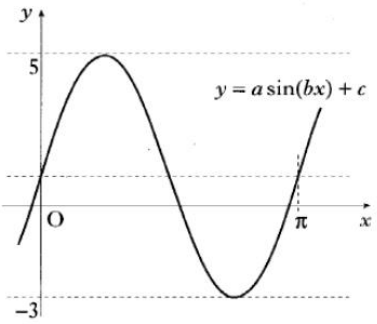
Name:	Date:
Question 1: A function is given by h(x) = $\frac{x+3}{10}$. Find the inverse function $h^{-1}(x)$.	3·3 Outcome 1
Question 2: Find the equation of the straight line which is parallel to the line with equation $y = 9x + 3$ and which passes through the point $(6, -2)$.	1·6 Bronze Outcome 1
Question 3: Triangle DEF has vertices D(-3, 10), E(-4, -7) and F(5, -4).  (a) Find the equation of the median EG. (b) Find the equation of the altitude DH. (c) Find the coordinates of the point of intersection of EG and DH.	1·8 Bronze Outcome 1 1·8 Silver Outcome 2 1·9 Silver Outcome 2
Question 4: Change the following into radians; (a) 30° (b) 210°	5·1 Silver Outcome 2
Question 5: A function is given as $v(r) = 4r^3 - 2r^2 + 5r - 11$. Calculate $v'(-1)$.	6·2 Bronze Outcome 1
My score:	

Exam Questions

Question 1:

The diagram shows a sketch of part of the graph of a trigonometric function whose equation is of the form $y = a\sin(bx) + c$.



Determine the values of a, b and c. **3**

Question 2:

Given that $y = 12x^3 + 8\sqrt{x}$,

where $x > 0$, find $\frac{dy}{dx}$. **3**

Question 3:

A, B and C are points such that AB is parallel to the line with equation $y + \sqrt{3}x = 0$ and BC makes an angle of $150°$ with the positive direction of the x-axis.

Are the points A, B and C collinear? **3**

My score: