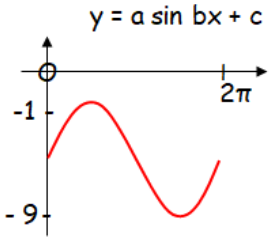
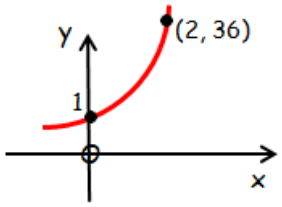
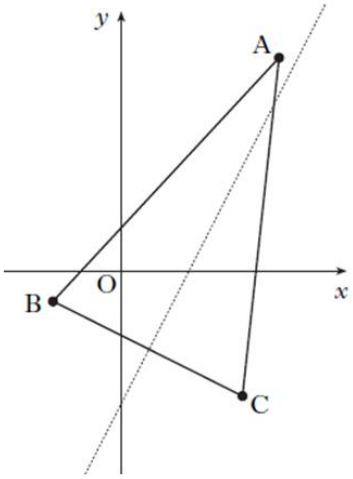
Name:	Date:
Question 1: Two functions are defined as $f(x) = x^2 + 3x$ and $g(x) = 4x - 1$. Calculate… g(f(-2)) (b) f(g(x))	3·2 Bronze Outcome 1 3·2 Silver Outcome 2
Question 2: For the graph below, write down the values of a, b and c. 	5·2 Silver Outcome 2
Question 3: Differentiate the following with respect to x. $$f(x) = \frac{x^6 - 2}{\sqrt{x}}$$	6·1 Gold Outcome 3
Question 4: The graph below has an equation in the form $y = a^x$. What is the value of a? 	4·2 Bronze Outcome 1
Question 5: Change $\frac{5\pi}{4}$ into degrees.	5·1 Bronze Outcome 1
My score:	

Exam Questions

Question 1:

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

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

Question 2:

A function, h, is defined by $h(x) = x^3 + 7$, where $x \in \mathbb{R}$.

Determine an expression for $h^{-1}(x)$. 3

Question 3:

What is the derivative of $\frac{1}{4x^3}$, $x \neq 0$?

My score: