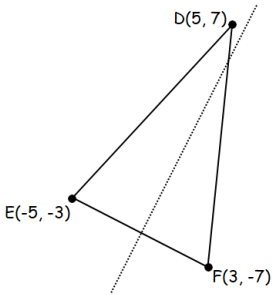
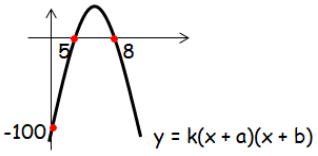
Name:	Date:
Question 1: Find the coordinates of the points of intersection of the curve $y = x^2 + x - 12$ and the line $y = 4x - 2$.	8·5 Bronze Outcome 1
Question 2: Triangle DEF has vertices D(5, 7), E(-5, -3) and F(3, -7).  (a) Find the equation of the perpendicular bisector EF. (b) Find the equation of the median from F. (c) Find the coordinates of the point of intersection of these two lines.	1·8 Gold Outcome 3 1·8 Bronze Outcome 1 1·9 Silver Outcome 2
Question 2: The equation of the parabola shown is of the form $y = k(x + a)(x + b)$.  What is the equation of this quadratic?	8·1 Silver Outcome 2
Question 4: Change the following angles into radians; (a) 30° and (b) 330°	5·1 Silver Outcome 2
Question 5: Find the equation of the tangent to the curve $y = x^3 - 8x$ at the point where x = -2.	6·3 Silver Outcome 2
My score:	

Exam Questions

Question 1:

Functions f and g are defined on suitable domains by $f(x) = \cos x$ and $g(x) = x + \frac{\pi}{6}$.

What is the value of $f\left(g\left(\frac{\pi}{6}\right)\right)$? **2**

Question 2:

For what value of k does the equation $x^2 - 5x + (k+6) = 0$ have equal roots? **3**

Question 3:

A function f is defined by the formula $f(x) = 3x - x^3$.

(a) Find the exact values where the graph of $y = f(x)$ meets the x- and y-axes. **2**

(b) Find the coordinates of the stationary points of the function and determine their nature. **7**

(c) Sketch the graph of $y = f(x)$. **1**

My score: