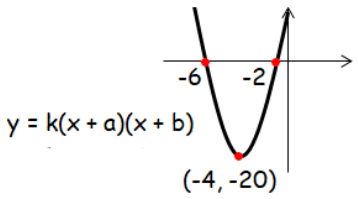
Name:	Date:
Question 1: Factorise fully $h(x) = x^3 - 91x + 90$.	7·1 Silver Outcome 2
Question 2: The equation of the parabola shown is of the form y = k(x + a)(x + b).  What is the equation of this quadratic?	8·1 Silver Outcome 2
Question 3: A function is given as $g(x) = 4x^2 - 5x$. Calculate $g'(\frac{1}{2})$.	6·2 Bronze Outcome 1
Question 4: Solve sin2x° = -cosx° for $0 \leq x \leq 360°$.	10·2 Silver Outcome 2
Question 3: Find the equation of the tangent at the point (-2, 4) on the circle $x^2 + y^2 - 10x + 6y - 9 = 0$.	11·2 Silver Outcome 2
My score:	

Exam Questions

Question 1:

A function f is defined on the set of real numbers by $f(x) = (x - 2)(x^2 + 1)$.

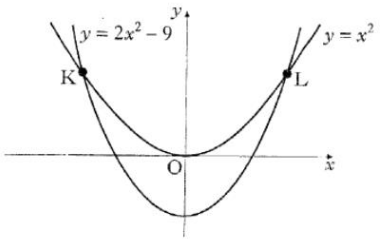
Find the coordinates of the stationary points on the curve with equation $y = f(x)$ and determine their nature. **8**

Question 2:

Find the range of values of k such that the equation $kx^2 - x - 1 = 0$ has no real roots. **3**

Question 3:

The curves with equations $y = x^2$ and $y = 2x^2 - 9$ intersect at K and L as shown.



8

Calculate the area enclosed between the curves.

My score: