7 The curve with equation $y = mx^2 + 64\sqrt{x} + 39$ has a stationary point with coordinates $(4, n)$ where m and n are integers.

Using calculus

(a) find the value of m and the value of n

(6)

(b) determine the nature of the stationary point.

(2)

Question 7 continued

(Total for Question 7 is 8 marks)

P 7 4 0 9 8 A 0 2 1 3 2