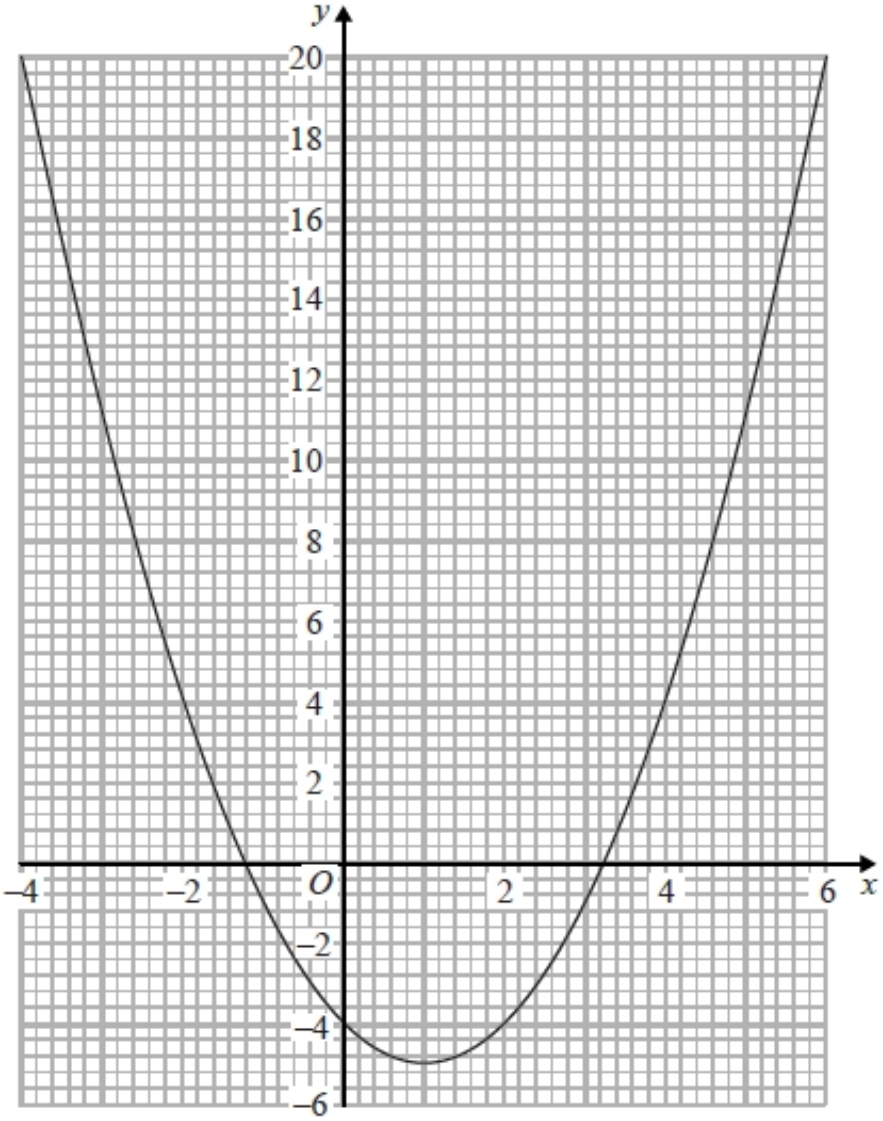
A135 Sketching quadratics and cubics

Q1.

Here is the graph of $y = x^2 - 2x - 4$



(a) Write down estimates for the roots of $x^2 - 2x - 4 = 0$

.....

(2)

(b) Write down the coordinates of the turning point of $y = x^2 - 2x - 4$

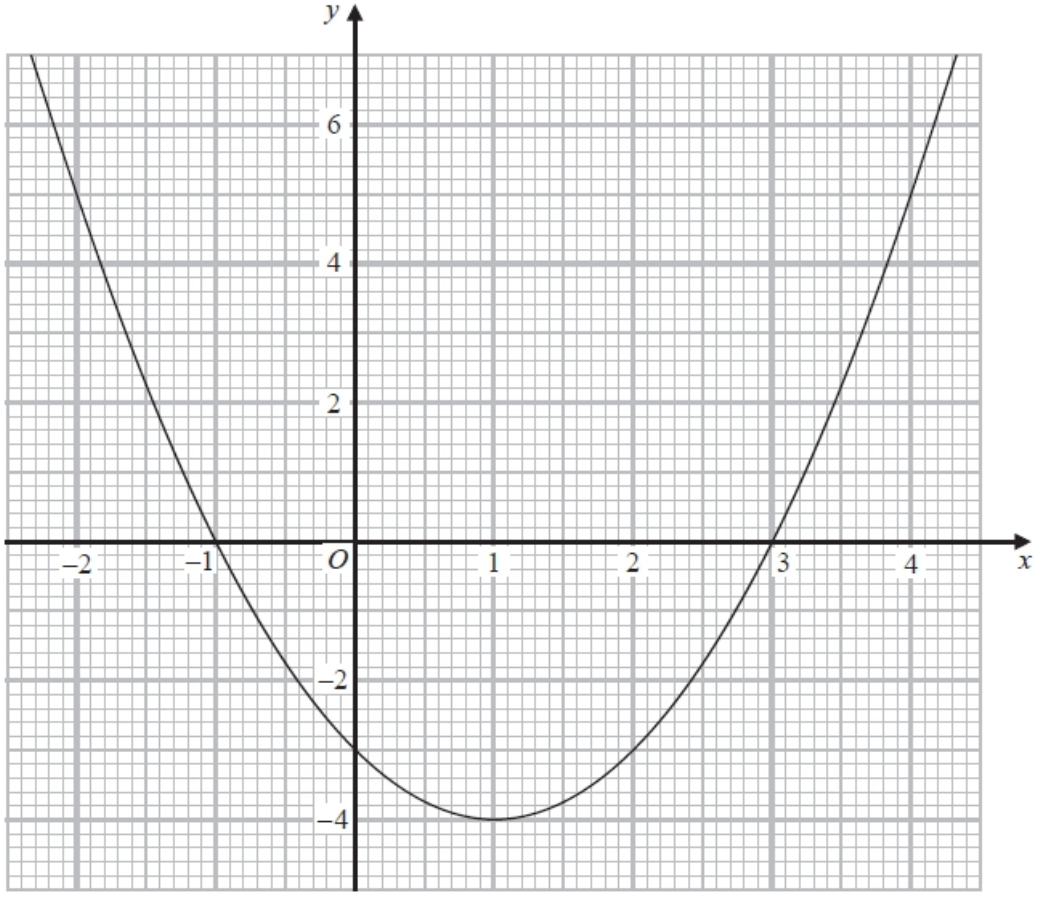
(..... , ...)

(1)

(Total for question = 3 marks)

Q2.

Here is the graph of $y = x^2 - 2x - 3$



(a) Write down the coordinates of the turning point on the graph of $y = x^2 - 2x - 3$

(..... , ...)

(1)

(b) Use the graph to find the roots of the equation $x^2 - 2x - 3 = 0$

.....

(2)

(Total for question = 3 marks)

Q3.

Sketch the quadratic $y = x^2 + 2x - 3$

Show clearly the x-axis and y-axis intercepts.

(Total for question = 4 marks)

Q4.

Sketch the quadratic Sketch $y = -x^2 – 4x + 5$

Show clearly the x-axis and y-axis intercepts.

(Total for question = 4 marks)

Q5.

Sketch the cubic $y = (x+3)(x+2)(x-2)$

Show clearly the x-axis and y-axis intercepts.

(Total for question = 3 marks)

Q6.

Sketch the cubic $y = -x(x-2)(x+3)$

Show clearly the x-axis and y-axis intercepts.

(Total for question = 3 marks)