Q1.

Circle the equation with roots 4 and –8

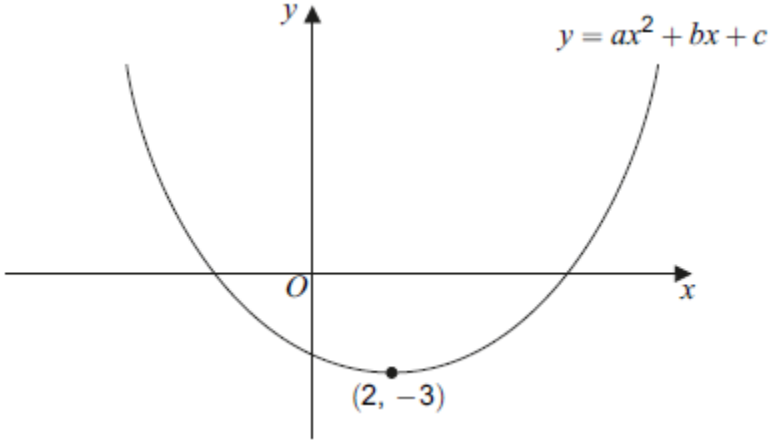
$4x(x - 8) = 0$ $(x - 4)(x + 8) = 0$

$x^2 - 32 = 0$ $(x + 4)(x - 8) = 0$

(Total 1 mark)

Q2.

A sketch of $y = ax^2 + bx + c$ is shown.
The minimum point is (2, −3).



For the sketch shown, circle the correct answer in each of the following.

(a) The value of a is

zero positive negative

(1)

(b) The value of c is

zero positive negative

(1)

(c) The solutions of $ax^2 + bx + c = 0$ are

both zero | both positive | both negative | one positive and one negative

(1)

(d) The **number** solutions of $ax^2 + bx + c = -6$ is

0 | 1 | 2 | 3

(1)

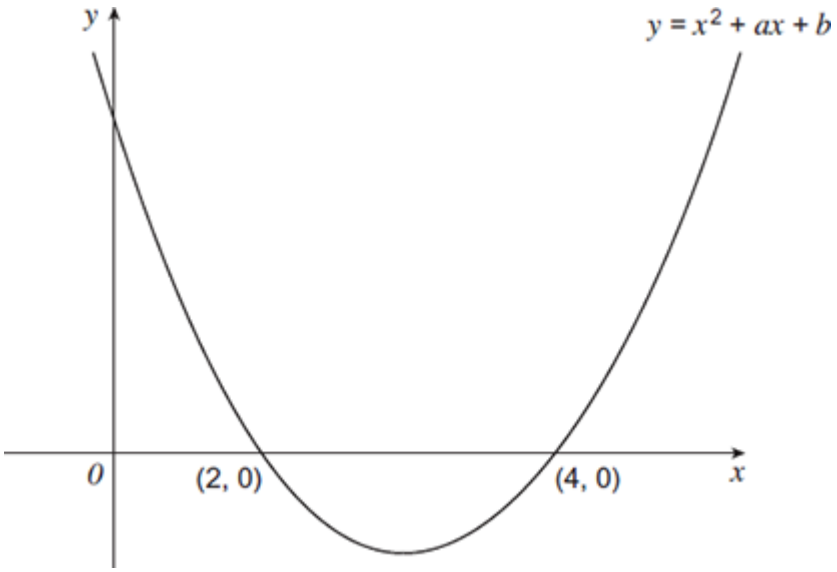
(e) The equation of the tangent to $y = ax^2 + bx + c$ at (2, −3) is

$x = 2$ | $y = 2$ | $x = -3$ | $y = -3$

(1)
(Total 5 marks)

Q3. The diagram shows a sketch of the graph of $y = x^2 + ax + b$

The graph crosses the x-axis at (2, 0) and (4, 0).



Work out the value of b.
You **must** show your working.

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b = ...

(Total 4 marks)