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1. Find $\int (6x^2 + 2 + x^{-\frac{1}{2}}) dx$, giving each term in its simplest form.

(4)

Q1

(Total 4 marks)

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3. On separate diagrams, sketch the graphs of

(a) $y = (x + 3)^2$,

(3)

(b) $y = (x + 3)^2 + k$, where k is a positive constant.

(2)

Show on each sketch the coordinates of each point at which the graph meets the axes.



