Higher Homework 2 – Skills from National 5

1. Factorise (a) $x^2 - 3$ (b) $2x^2 + 8x - 10$ **3**

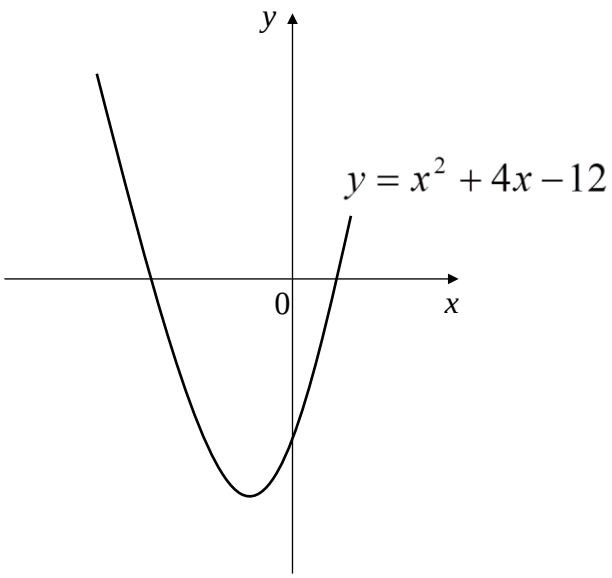
2. Write the following in completed square form $x^2 + 8x + 3$ **2**

3. Simplify (a) $\dfrac{x^4 \times x^{-5}}{x^{-3}}$ (b) $\dfrac{8}{\sqrt{6}}$ (c) $\cos x \tan x$ **4**

4. Solve (a) $\cos x = -0.26, \quad 0 \le x \le 360°$ **2**

(b) $\sin 2x = \dfrac{\sqrt{3}}{2}, \quad 0 \le x \le 2\pi$ **4**

5. Identify the coordinates of the y and x intercepts and the turning point for this graph



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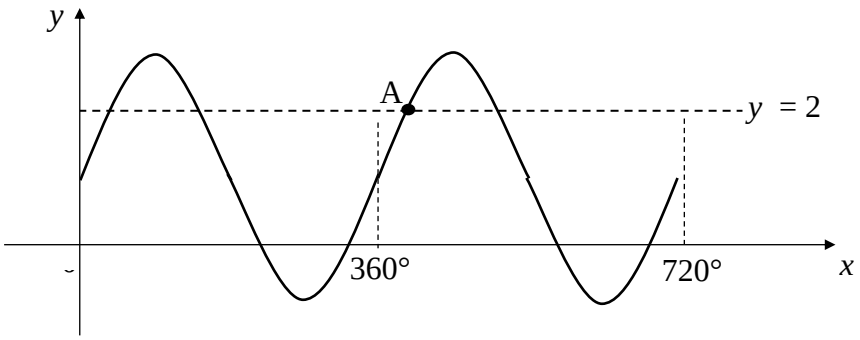
6. The diagram below shows the graph of $y = 2\sin x° + 1$ for $0 \le x \le 720°$.
The line $y = 2$ has also been drawn on the diagram.



State the coordinates of point A. **5**