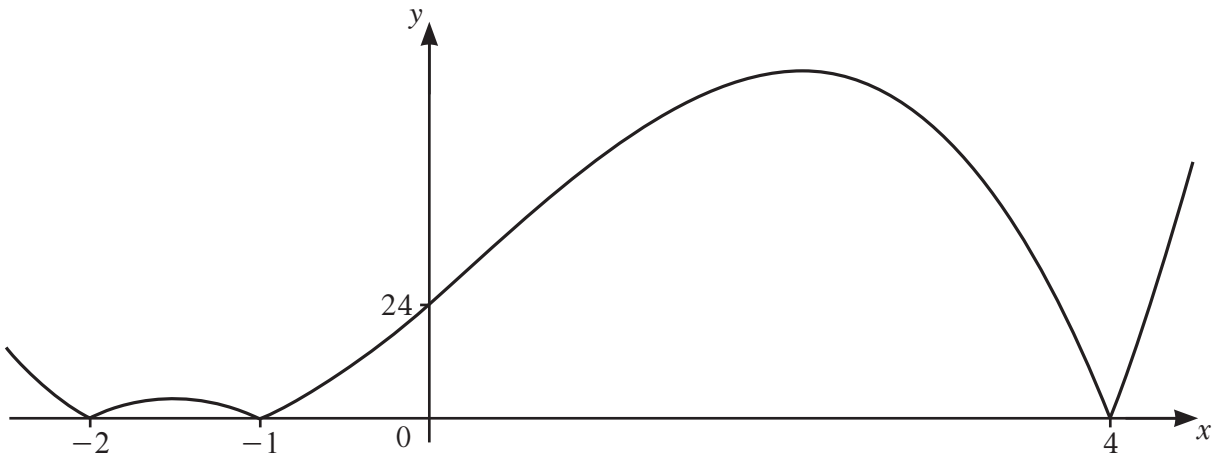
**1**

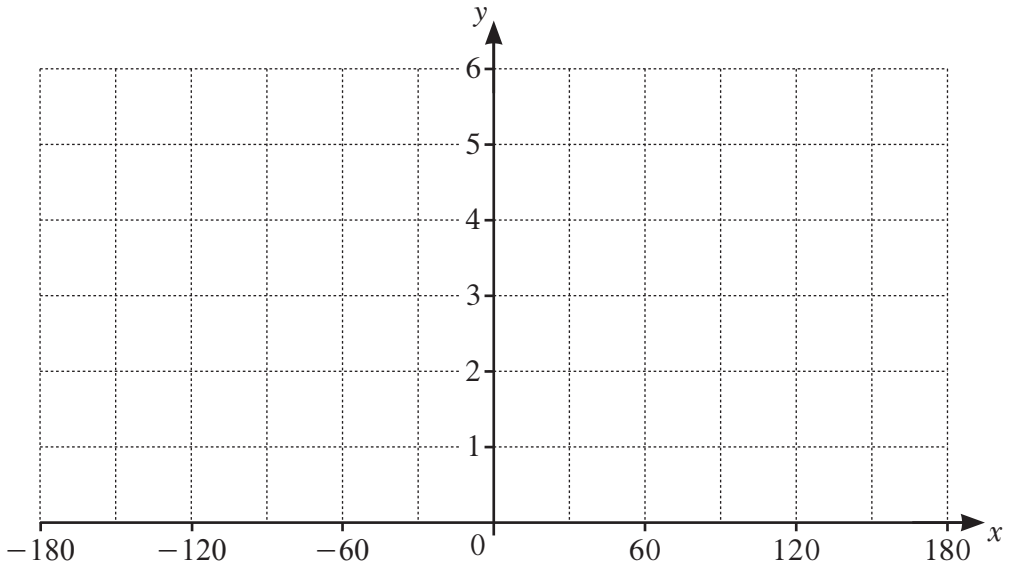



The diagram shows the graph of $y = |\mathrm{p}(x)|$, where $\mathrm{p}(x)$ is a cubic function. Find the two possible expressions for $\mathrm{p}(x)$. [3]

**2** **(a)** Write down the amplitude of $1 + 4\cos\left(\frac{x}{3}\right)$. [1]

**(b)** Write down the period of $1 + 4\cos\left(\frac{x}{3}\right)$. [1]

**(c)** On the axes below, sketch the graph of $y = 1 + 4\cos\left(\frac{x}{3}\right)$ for $-180° \leqslant x° \leqslant 180°$.




[3]

**3** **(a)** Write $\dfrac{\sqrt{p}\left(qr^2\right)^{\frac{1}{3}}}{\left(q^3p\right)^{-1}r^3}$ in the form $p^aq^br^c$, where $a$, $b$ and $c$ are constants. [3]

**(b)** Solve $6x^{\frac{2}{3}} - 5x^{\frac{1}{3}} + 1 = 0$. [3]

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