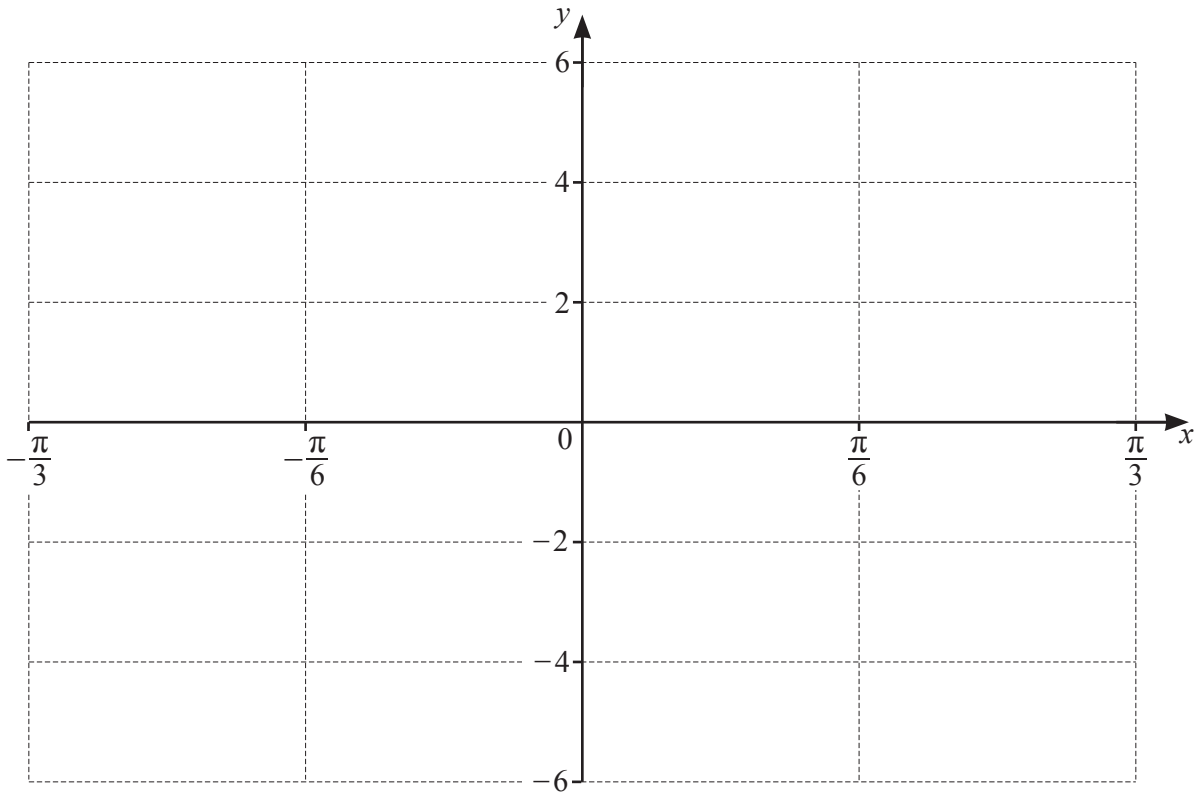
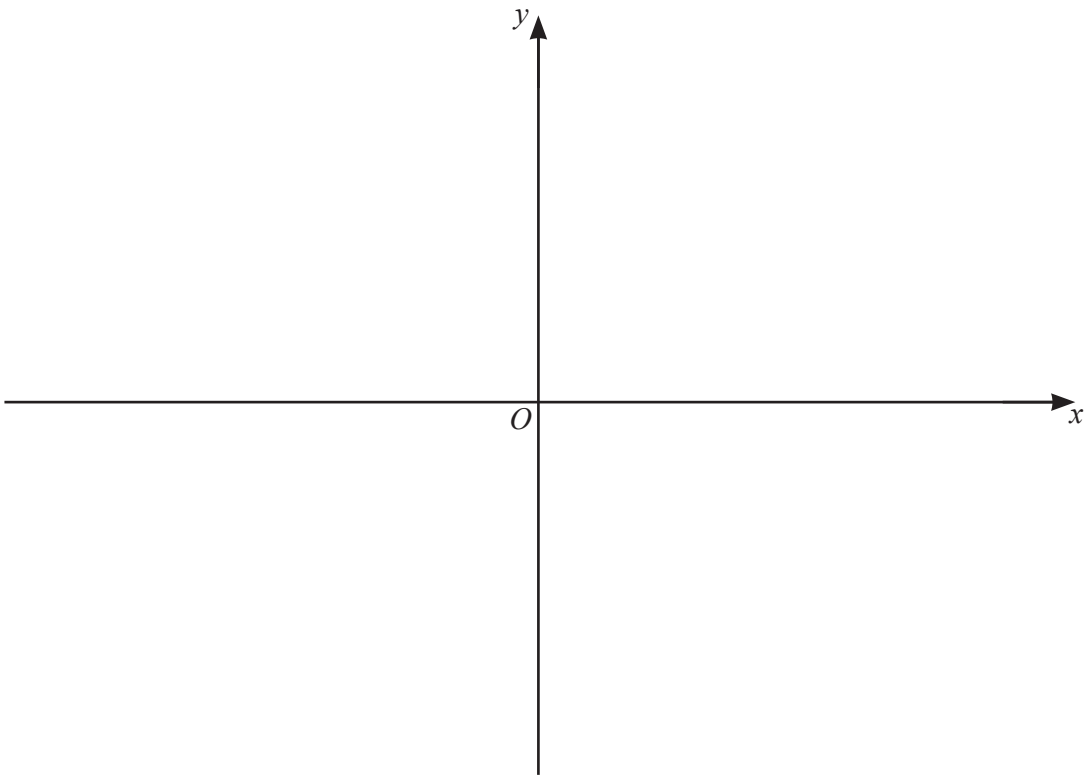
1 On the axes, sketch the graph of $y = 4\sin 3x - 2$ for $-\frac{\pi}{3} \leqslant x \leqslant \frac{\pi}{3}$. [3]



2 **(a)** Show that $2x^2 + x - 15$ can be written in the form $2(x+a)^2 + b$, where a and b are exact constants to be found. [2]

(b) Hence write down the coordinates of the stationary point on the curve $y = 2x^2 + x - 15$. [2]

(c) On the axes, sketch the graph of $y = |2x^2 + x - 15|$, stating the coordinates of the points where the graph meets the coordinate axes. [3]



(d) Write down the value of the constant k for which the equation $|2x^2 + x - 15| = k$ has 3 distinct solutions. [1]

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