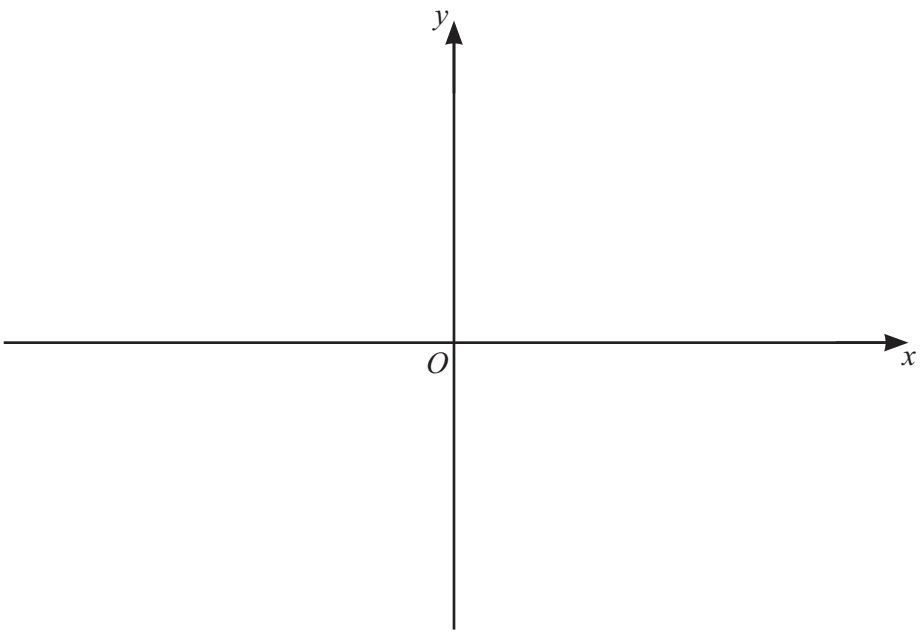
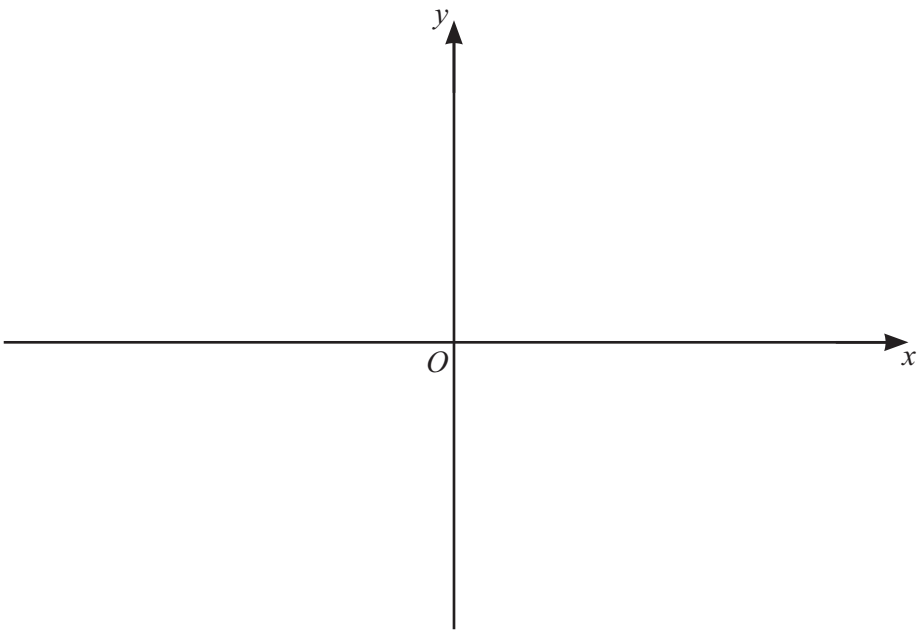
1 **(a)** On the axes, sketch the graph of $y = (2x-5)(x+3)(1-x)$, stating the intercepts with the coordinate axes. [3]



(b) Hence

(i) solve the inequality $(2x-5)(x+3)(1-x) \leqslant 0$ [2]

(ii) on the axes below, sketch the graph of $y = |(2x-5)(x+3)(1-x)|$. [1]



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2 **(a)** Evaluate $\int_{\frac{\pi}{3}}^{\frac{\pi}{2}} \cos\frac{x}{4}\,\mathrm{d}x$. You must show all your working. [4]

(b) Find $\int\left(\frac{1}{4x-3}+\frac{1}{x^3}\right)\mathrm{d}x$. [3]

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