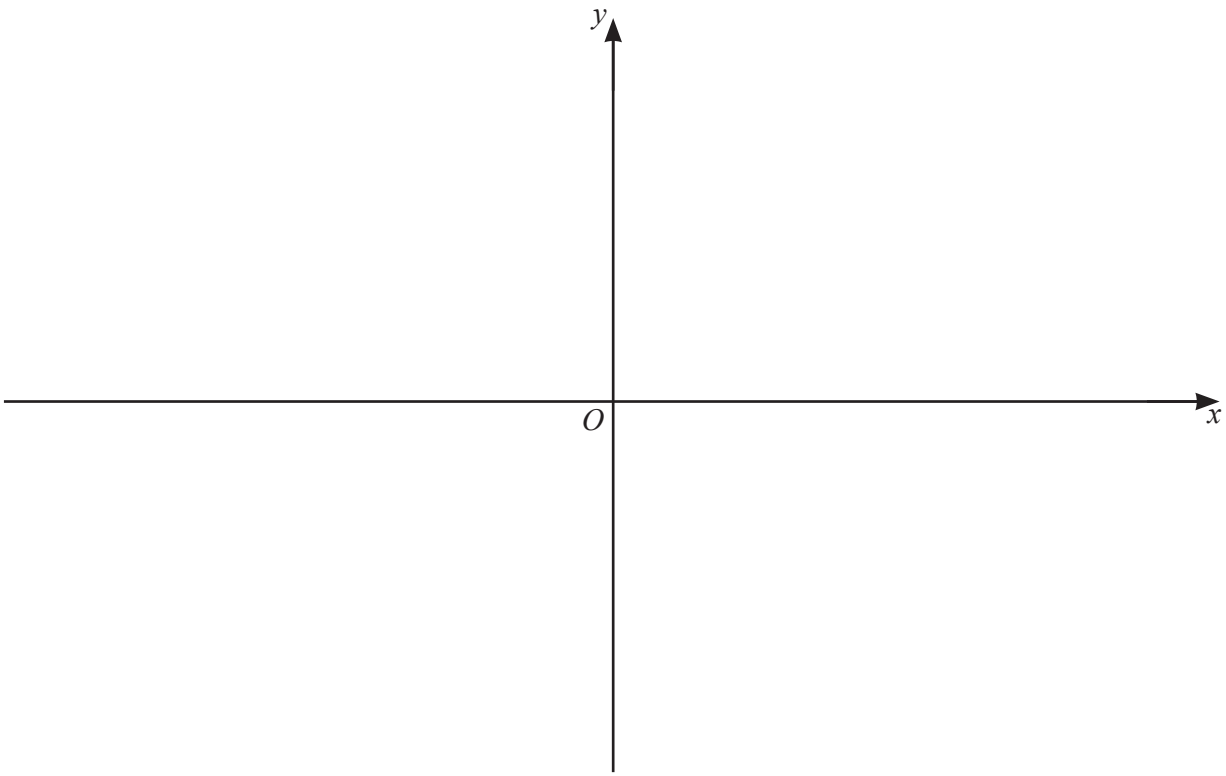
7 A curve has equation $y = \mathrm{f}(x)$, where $\mathrm{f}(x) = (2x+1)(3x-2)^2$.

(a) Show that $\mathrm{f}'(x)$ can be written in the form $2(3x-2)(px+q)$, where p and q are integers. [3]

(b) Hence find the coordinates of the stationary points on the curve. [2]

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(c) On the axes below, sketch the graph of $y = \mathrm{f}(x)$, stating the intercepts with the coordinate axes. [3]



(d) Find the values of k such that the equation $\mathrm{f}(x) = k$ has 3 distinct solutions. [2]