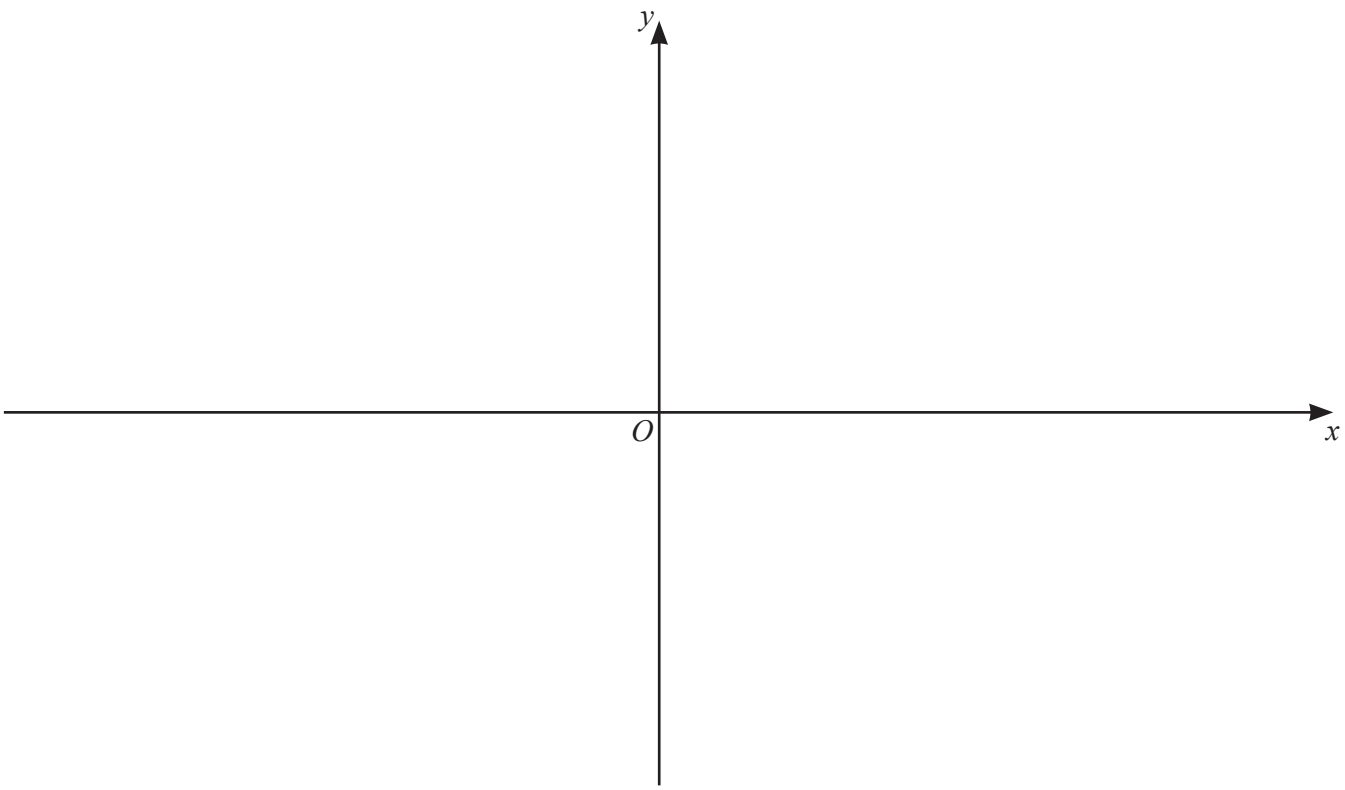
2 A curve has equation $y = (5-x)(x+2)^2$.

(a) Find the x-coordinates of the stationary points on the curve. [4]

(b) On the axes below, sketch the graph of $y = (5-x)(x+2)^2$, stating the coordinates of the points where the curve meets the axes. [3]



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(c) Find the values of k for which the equation $k = (5-x)(x+2)^2$ has one distinct root only. [3]

3 Find the coefficient of x^8 in the expansion of $\left(1-x^2\right)\left(2x-\frac{1}{x}\right)^{10}$. [5]