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5. The equation $2x^2 - 3x - (k + 1) = 0$, where k is a constant, has no real roots.

Find the set of possible values of k .

(4)

Q5

(Total 4 marks)



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10. (a) On the same axes sketch the graphs of the curves with equations

(i) $y = x^2(x - 2)$, (3)

(ii) $y = x(6 - x)$, (3)

and indicate on your sketches the coordinates of all the points where the curves cross the x -axis.

(b) Use algebra to find the coordinates of the points where the graphs intersect. (7)



