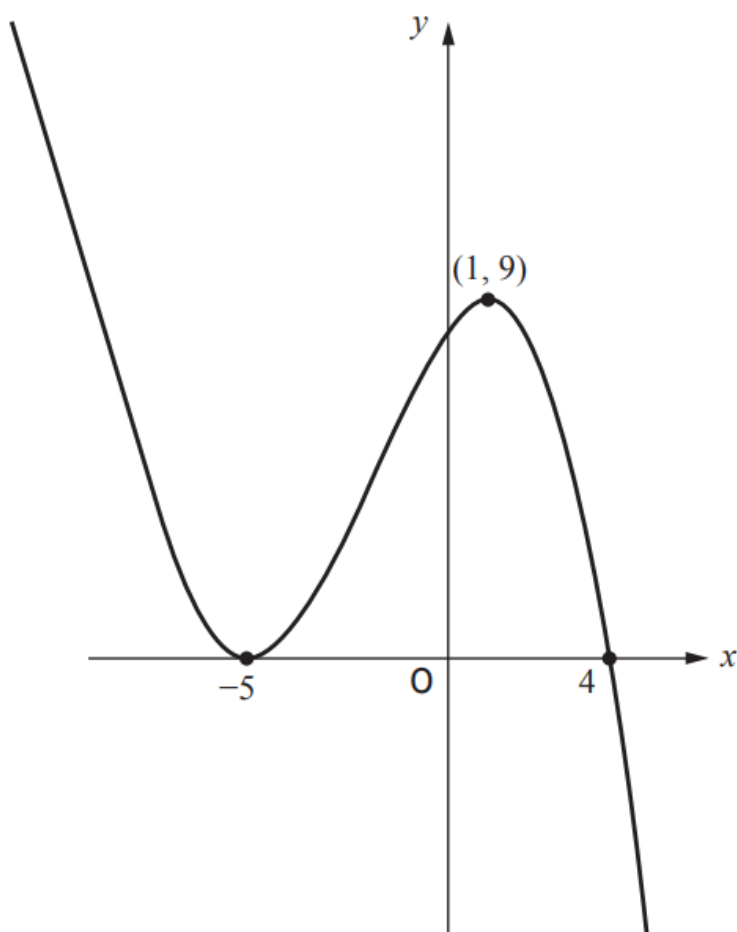




The diagram below shows the graph with equation $y = f(x)$, where
 $f(x) = k(x-a)(x-b)^2$.



- (a) Find the values of a , b and k . 3
- (b) For the function $g(x) = f(x) - d$, where d is positive, determine the range of values of d for which $g(x)$ has exactly one real root. 1

Answers:

- (a) $a = 4$, $b = -5$, $k = -\frac{1}{12}$ (b) $d > 9$