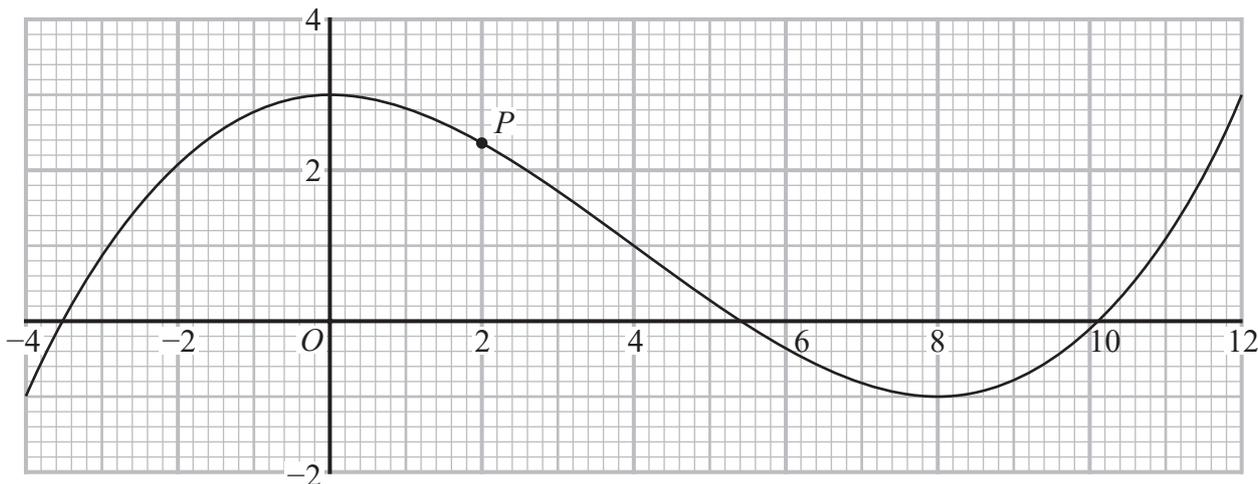


18 The diagram shows the graph of $y = f(x)$ for $-4 \leq x \leq 12$



The point P on the curve has x coordinate 2

(a) (i) Use the graph to find an estimate for the gradient of the curve at P .

.....
(3)

(ii) Hence find an equation of the tangent to the curve at P .
Give your answer in the form $y = mx + c$

.....
(2)

The equation $f(x) = k$ has exactly two different solutions for $-4 \leq x \leq 12$

(b) Use the graph to find the two possible values of k .

.....,
(2)

(Total for Question 18 is 7 marks)

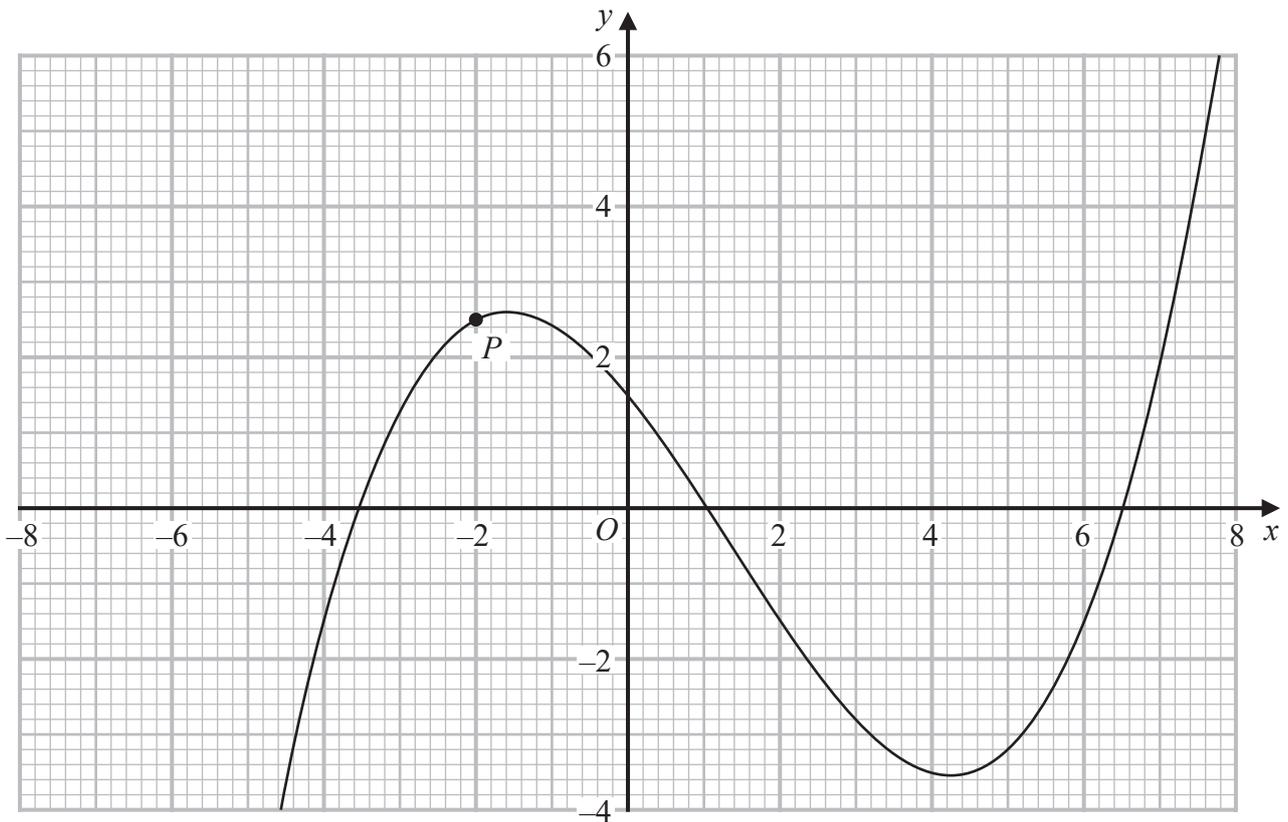
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21 The diagram shows the graph of $y = f(x)$



The point P has x coordinate -2

Use the graph to find an estimate for the gradient of the curve at P

(Total for Question 21 is 3 marks)

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