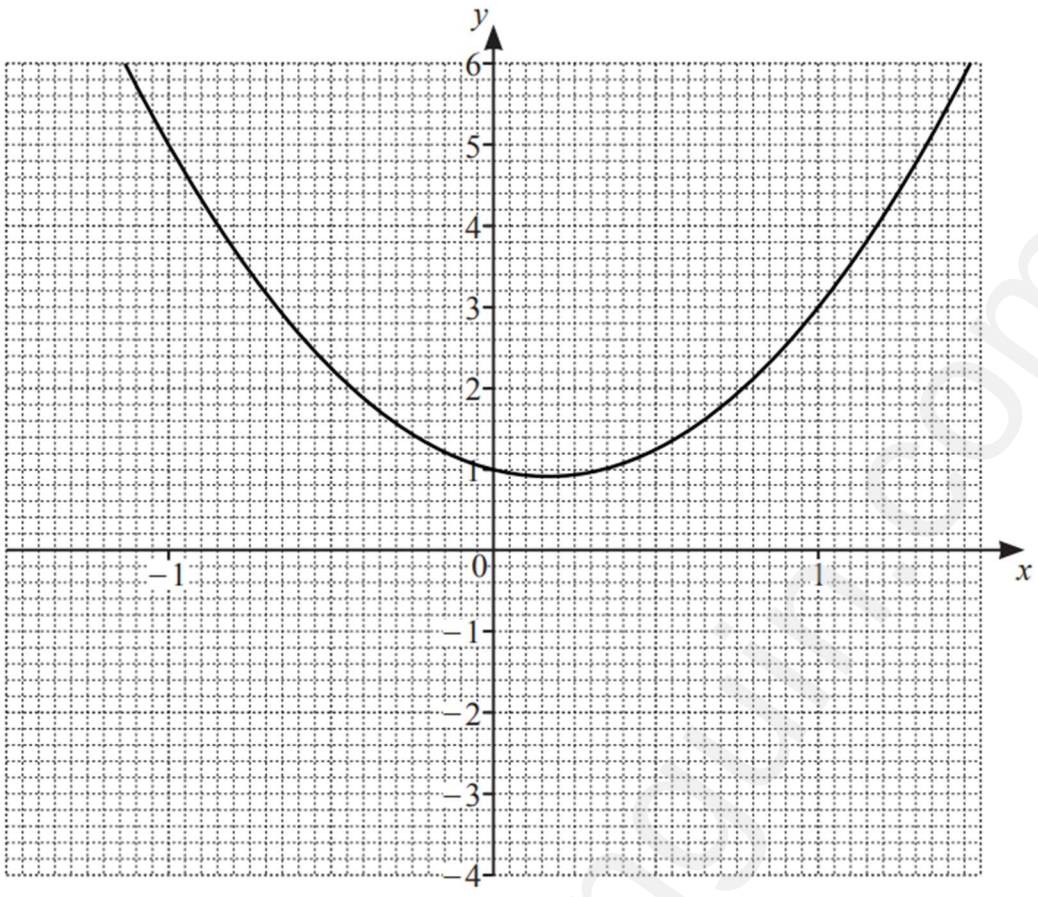
(b)



(i) On the grid, draw the tangent to the curve at $x = 1$. [1]

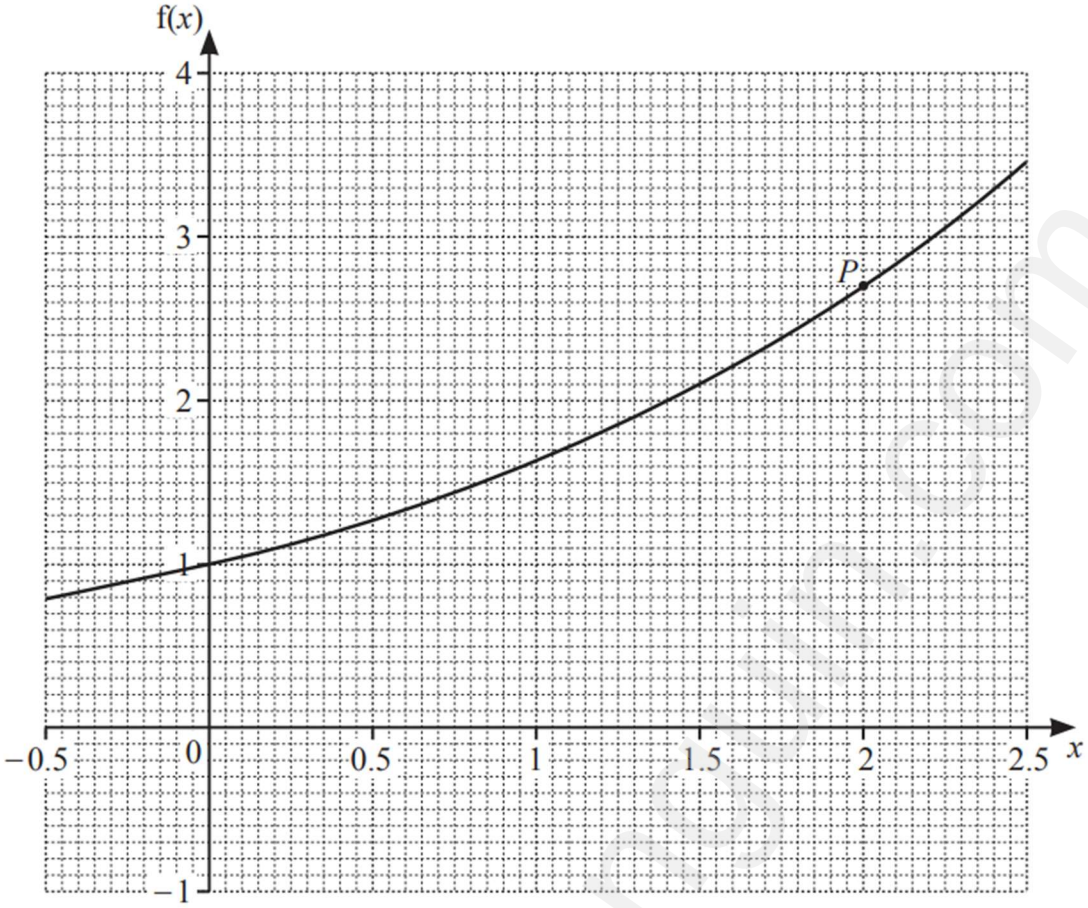
(ii) Use your tangent to estimate the gradient of the curve at $x = 1$.

..... [2]

(iii) Write down the equation of your tangent in the form $y = mx + c$.

$y =$ ..... [2]

(b)

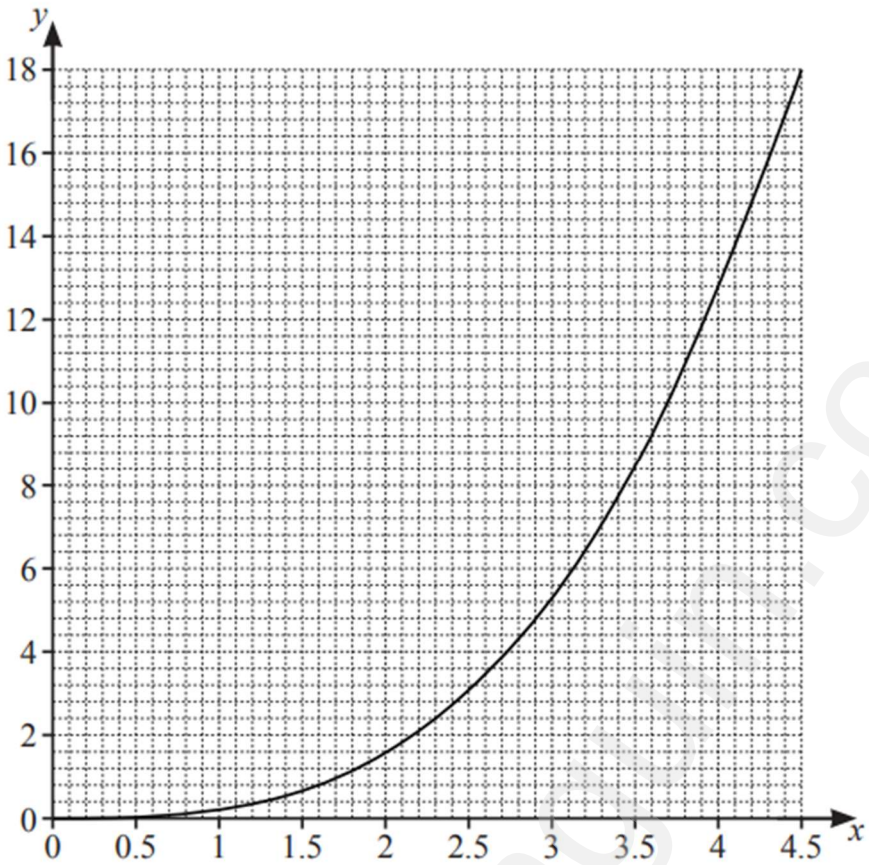


The diagram shows the graph of another function.

By drawing a suitable tangent, find an estimate for the gradient of the function at the point P.

..... [3]

18



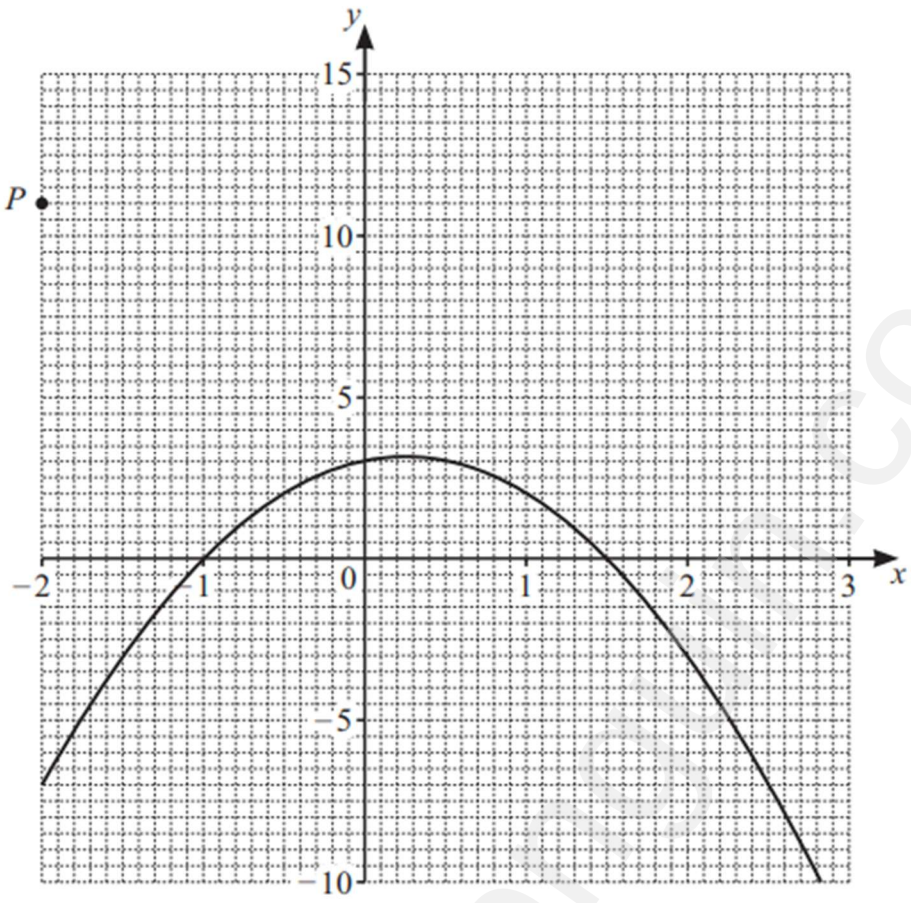
The graph of $y = f(x)$ is drawn on the grid.

(a) Draw the tangent to the graph at the point $x = 3$. [1]

(b) Use your tangent to find an estimate for the gradient of the curve at the point $x = 3$.

..... [2]

11 The diagram shows the graph of $y = f(x)$ and the point $P(-2, 11)$.



The tangent from P touches the graph of $y = f(x)$ at the point (a, b).
The values of a and b are integers.

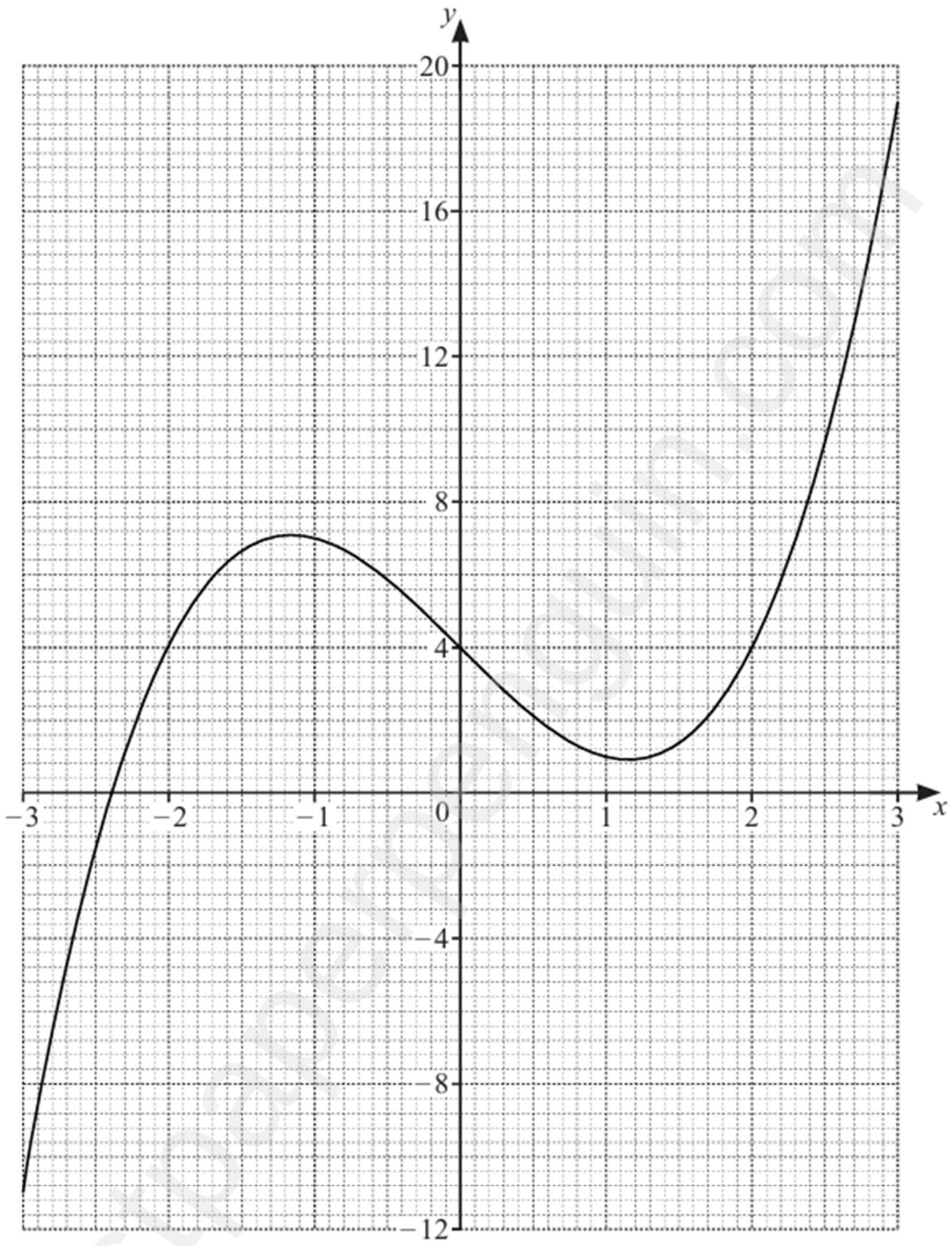
(a) By drawing this tangent, find the value of a and the value of b.

$a =$ ....., $b =$ ..... [2]

(b) Find the equation of the tangent.
Give your answer in the form $y = mx + c$.

$y =$ ..... [3]

5 **(a)** The diagram shows the graph of $y = f(x)$ for $-3 \leqslant x \leqslant 3$.



(ii) By drawing a suitable tangent, find an estimate of the gradient of the graph at the point $(-2, 4)$.

..... [3]