

# Past-paper walk-through

Sketching curves ■ E2.11

eXercise

## Questions in this set

- 0580/21 J25 Q11 ■ 2 marks

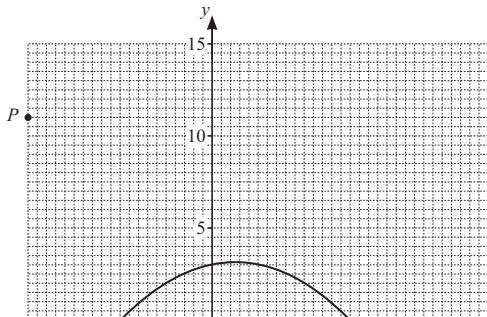
## Reading the mark scheme

- **B1** a mark that stands on its own – the point is either made or not.
- **M1** a *method* mark: the right approach, even if the number is wrong.
- **A1** an *answer* mark, and it usually needs its M mark first.
- **C1** a working mark on the way to the answer.
- **//** separates answers the examiner accepts equally.
- **ecf** = error carried forward: a later part is marked on your own earlier answer.
- **owtte** = “or words to that effect” – the wording need not match.

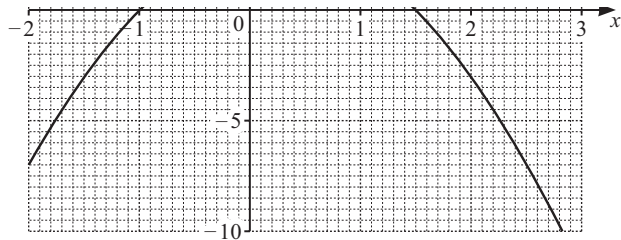
## Question 11

0580/21 J25 ■ Q11 ■ 2 marks

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



## Question 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  $b$ .

## Question 11

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

## Question 11

# Solution 11

(a)

## Mark scheme

- For correct ruled tangent and  
 $a = 1, [b =] 2$
- 2 B1 for correct ruled tangent or both values
- correct without a correct tangent



## Solution 11

**(b) Mark scheme**

---

$$y = 5 - 3x$$

- 3 3FT their (a) provided  $m < 0$ ,  $c \geq 0$  (B1)
- for (their  $-3$ ) $x + c$
- or M1 for correct rise
- run
- for their line (B1)
- for  $mx + c$  where  $c$  is the correct intercept
- for their graph,  $m \leq 0$