

Past-paper walk-through

Coordinates ■ E3.1

eXercise

Questions in this set

- 0580/22 N25 Q17 ■ 11 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 17

0580/22 N25 ■ Q17 ■ 11 marks

- 17** B is the point $(-3, 1)$ and D is the point $(-5, 9)$.
 BD is a diagonal of the kite $ABCD$.

- (a)** The ratio of the lengths of the diagonals $BD : AC = 2 : 3$.

Work out the length of AC .

Give your answer as a surd in its simplest form.

Question 17

Question 17

(b) Find the coordinates of the midpoint of BD .

Question 17

- (c) The diagonal AC of the kite passes through the midpoint of BD .

Find an equation of AC .

Give your answer in the form $y = mx + c$.

Question 17

Solution 17

(a) Mark scheme

- 3 17 cao
- 5 B4 for answer equivalent to 3 17 but
- not in the correct form e.g. $3\frac{68}{2}$,
- 6 17
- 2
- ,
- 153
- OR B3

Solution 17

- for
- 68 or 2 17
- or M2 for $(9 - 1)^2 + (-5 - -3)^2$ oe
- or M1 for $(9 - 1)$ or $(-5 - -3)$ oe
- and M1
- for
- 3
- 68
- 2
- their

Solution 17

■ ×

■ oe

Solution 17

(b)

Mark scheme

- $(-4, 5)$
- 2 B1 for each coordinate

Solution 17

(c) Mark scheme

- $y = 1$
- $4x + 6$ final answer
- 4 M1 for
- 9 1
- grad
- 5 3
- BD
- —

Solution 17

■ = ——— oe (M1)

■ for

■ 1

■ grad

■ grad

■ AC

■ their

■ BD

■ —

■ = (M1)

Solution 17

- for their $(-4, 5)$ substituted into
- $y = \text{their } mx + c$ oe
- 0580/22
- October/November 2025
- Partial Marks