MME

GCSE MATHEMATICS
AQA | Edexcel | OCR | WJEC

Bearings

Please write clearly in block capitals

Forename:
Surname:

Materials

For this paper you must have:
• mathematical instruments

You *can* use a calculator.

Instructions

• Use black ink or black ball-point pen. Draw diagrams in pencil.
• Fill in the boxes at the top of this page.
• Answer all questions.
• You must answer the questions in the spaces provided. Do not write outside the box around each page or on blank pages.
• Do all rough work in this book. Cross through any work you do not want to be marked.
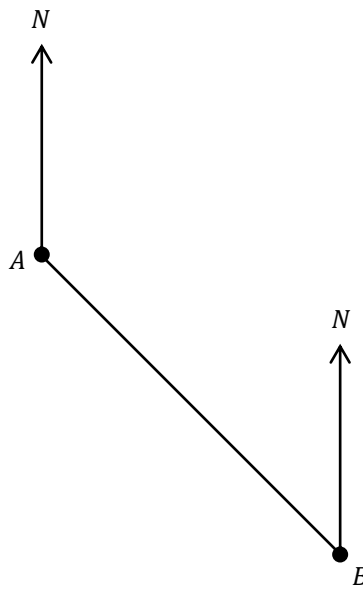
Information

• The marks for questions are shown in brackets.
• You may ask for graph paper, tracing paper and more answer paper. These must be tagged securely to this answer book.

Advice

• In all calculations, show clearly how you work out your answer.

1 By measuring the angles below, state the bearings of:

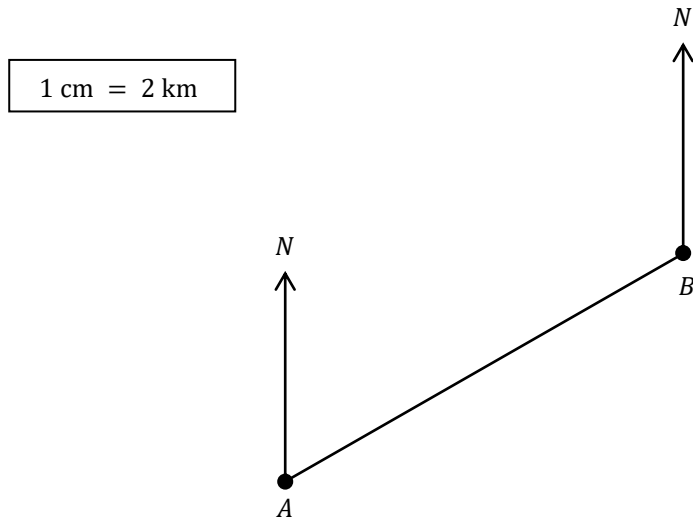**1(a)** *A* From *B*

[1 mark]

Answer _____ °

1(b) *B* From *A*

[1 mark]

Answer _____ °

2   A diagram of a bearing is shown below.

$$1 \text{ cm } = 2 \text{ km}$$

By measuring the diagram given:

2(a)   State the bearing of B from A.

[1 mark]

Answer _____

2(b)   State the bearing of A from B.

[1 mark]

Answer _____

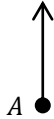**2(c)**   Find the distance between A and B.
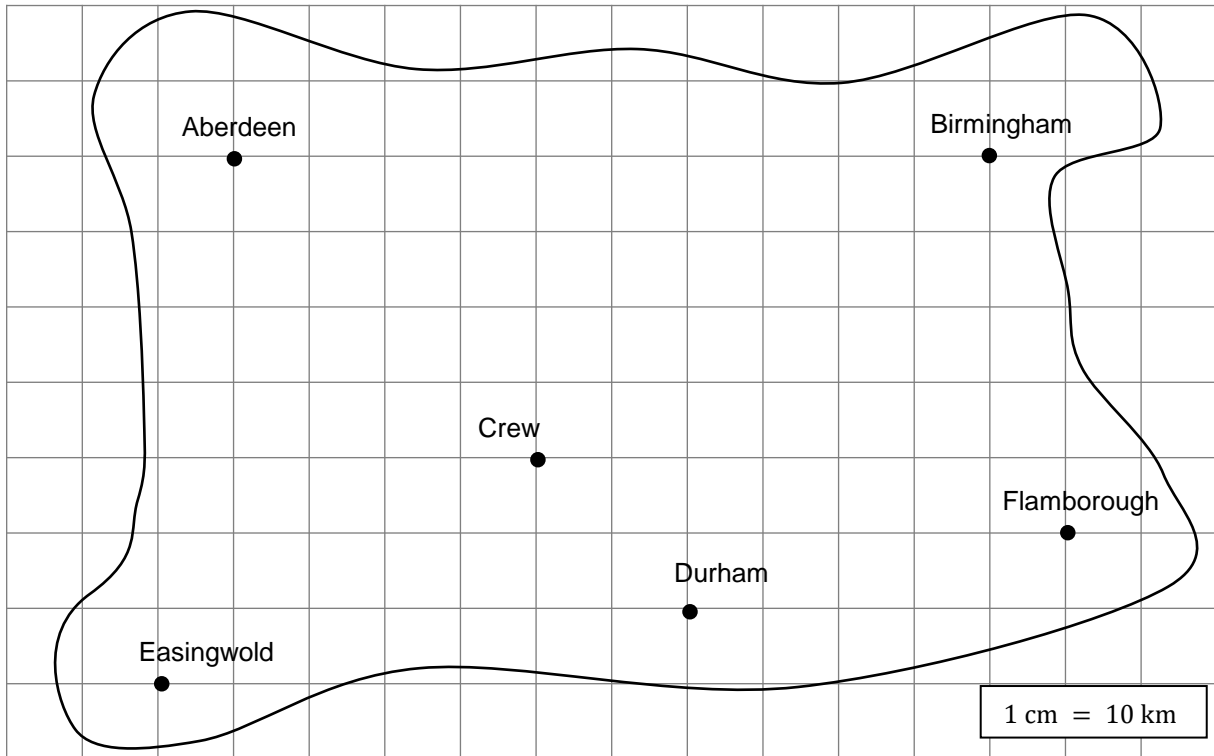
[1 mark]

_____

_____

Answer _____ km

3

Turn over ▶

3   The location C is on a bearing of $140°$ from A.

The bearing of C from B is $250°$

Find the location C and mark it on the diagram below.

[3 marks]

A ●

B ●

Turn over for next question

3

© 2023 MME Revise

4   A map with a scale is given below.

Give the bearings and the distance for the following journeys.

4(a)   Aberdeen to Flamborough

[1 mark]

_____

Bearing = _____   Distance = _____

4(b)   Birmingham to Crewe

[1 mark]

_____

Bearing = _____   Distance = _____

4(c)   Durham to Crewe.

[1 mark]

_____

Bearing = _____   Distance = _____

3

Turn over ▶

5   Starting at point A, Freya makes a journey as follows:
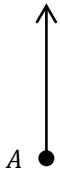
8 km on a bearing of 135° to B

4 km, on a bearing of 180° to C

6 km on a bearing of 315° to D

5(a)   Use the space below to draw a suitable diagram to represent her journey.

[3 marks]

$$1 \text{ cm } = 1 \text{ km}$$

A •

5(b)   Freya wants to return to A.

What is the bearing of A from D?

[1 mark]

_____

_____

Turn over for next question

4
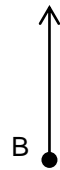
Turn over ▶

6   The bearing of C from A is 190°, and C is 5 km from A.

The bearing of D from B is 270°, and D is 7 km from A.

6(a)   Draw points C and D on the diagram below using the information given.

[2 marks]

| 1 cm = 1 km |

A ●

B ●

6(b)   Work out the bearing of C from D, and give the distance they are apart.

[2 mark]

_____

_____

Turn over for next question

4

Turn over ►

7 George needs to take the route as follows.
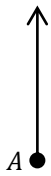
6 km on a bearing of $080°$ from A to B

5 km on a bearing of $160°$ from B to C

The scale is 1.5 cm $= 1$ km

However, George uses an incorrect scale of 1 cm $= 1$ km and ends up at D.

What bearing and distance does he need to take to end up at the correct destination of C?

[4 marks]

A •

Bearing = _____

Distance = _____

End of Questions

END