Edexcel GCSE
Mathematics (Linear) – 1MA0

BEARINGS

Materials required for examination
Ruler graduated in centimetres and millimetres, protractor, compasses, pen, HB pencil, eraser.
Tracing paper may be used.

Items included with question papers
Nil

Instructions

Use black ink or ball-point pen.
Fill in the boxes at the top of this page with your name, centre number and candidate number.
Answer all questions.
Answer the questions in the spaces provided – there may be more space than you need.
Calculators may be used.

Information

The marks for each question are shown in brackets – use this as a guide as to how much time to spend on each question.
Questions labelled with an asterisk (*) are ones where the quality of your written communication will be assessed – you should take particular care on these questions with your spelling, punctuation and grammar, as well as the clarity of expression.

Advice

Read each question carefully before you start to answer it.
Keep an eye on the time.
Try to answer every question.
Check your answers if you have time at the end.
1. Work out the bearing of $B$ from $A$.

Diagram NOT accurately drawn

\[ 220 \, {}^\circ \]

(2 marks)

2. (a) Write down the bearing of $A$ from $P$.

\[ 060 \, {}^\circ \]

(b) Work out the bearing of $B$ from $P$.

\[ 220 \, {}^\circ \]

(3 marks)
3.

(a) Measure and write down the bearing of B from A.

332°

(1)

(b) On the diagram, draw a line on a bearing of 107° from A.

(1)

(2 marks)

4. The diagram shows the position of two ports P and Q on a map.

(a) Measure the bearing of Q from P.

O 48°

(1)

A rock R is on a bearing of 150° from Q.
On the map R is 6 cm from Q.

(b) Mark the position of R with a cross (★) and label it R.

(2)

(3 marks)
5. The diagram shows the position of a lighthouse $L$ and a harbour $H$.

The scale of the diagram is 1 cm represents 5 km.

(a) Work out the real distance between $L$ and $H$.

\[ 6.8 \times 5 \]

\[ 34 \text{ km} \]

(Between 33 and 35)

(b) Measure the bearing of $H$ from $L$.

\[ 110^\circ \]

A boat $B$ is 20 km from $H$ on a bearing of 040°

(c) On the diagram, mark the position of boat $B$ with a cross ($\times$).

Label it $B$.  

(2) (4 marks)
6. The diagram shows the positions of two villages, Beckampton (B) and West Kennett (W).

Scale: 4 cm represents 1 km.

(a) Work out the real distance, in km, of Beckampton from West Kennett.

\[ \text{Distance} = 7.6 \text{ cm} \]

\[ \text{Distance in km} = 2.4 \]

The village, Avebury (A), is on a bearing of 038° from Beckampton.

On the diagram, A is 6 cm from B.

(b) On the diagram, mark A with a cross (×).

Label the cross A.

(4 marks)
7. The diagram shows the position of two boats, $P$ and $Q$.

The bearing of a boat $R$ from boat $P$ is $060^\circ$
The bearing of boat $R$ from boat $Q$ is $310^\circ$

In the space above, draw an accurate diagram to show the position of boat $R$.
Mark the position of boat $R$ with a cross ($\times$). Label it $R$.

(3 marks)
8. The diagram shows the positions of two telephone masts, $A$ and $B$, on a map.

(a) Measure the bearing of $B$ from $A$.

Another mast $C$ is on a bearing of $160^\circ$ from $B$.

On the map, $C$ is 4 cm from $B$.

(b) Mark the position of $C$ with a cross ($\times$) and label it $C$. 

(3 marks)
9. The bearing of a ship from a lighthouse is $050^\circ$.

Work out the bearing of the lighthouse from the ship.

(Not drawn to scale.)

$230^\circ$

(2 marks)