Write your name here

Surname		Other names	

In the style of:
Pearson Edexcel
GCSE

Centre Number

Candidate Number

Mathematics

Bearings

Foundation Tier

GCSE style questions arranged by topic

Paper Reference
1MA0/2F

You must have: Ruler graduated in centimetres and millimetres, protractor, pair of compasses, pen, HB pencil, eraser, calculator.

Total Marks

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.**
- If your calculator does not have a π button, take the value of π to be 3.142 unless the question instructs otherwise.
- Diagrams are **NOT** accurately drawn, unless otherwise indicated.
- You must **show all your working out.**

Information

- The total mark for this paper is 80
- The marks for **each** question are shown in brackets
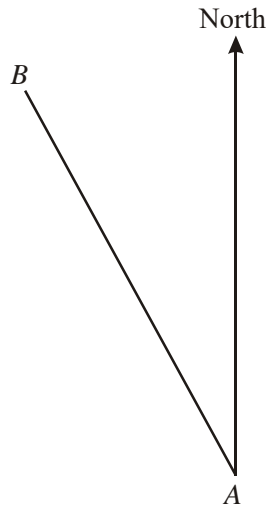 – *use this as a guide as to how much time to spend on each question.*

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.

Turn over ▶

1

North

B

A

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

…………………°

(1)

(b)   On the diagram, draw a line on a bearing of 103° from *A*.

(1)

(Total for Question 1 is 2 marks)

2

N

X

65°

140°

P

Y
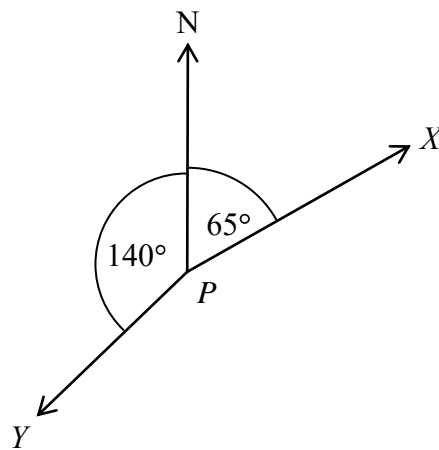
(a) Write down the bearing of *X* from *P*.

°

……………………………

(1)

(b) Work out the bearing of Y from *P*.

°

……………………………

(3)

(Total for Question 2 is 4 marks)

3 A ship leaves port X and travels 9 km on a bearing of 120° to point Y.
The ship then turns and travels 12 km on a bearing of 030° to point Z.
This journey is shown on the scale drawing below.

Scale: 1cm represents 1km

N

120°

X

9 km

N

030°

Y

12 km

Z
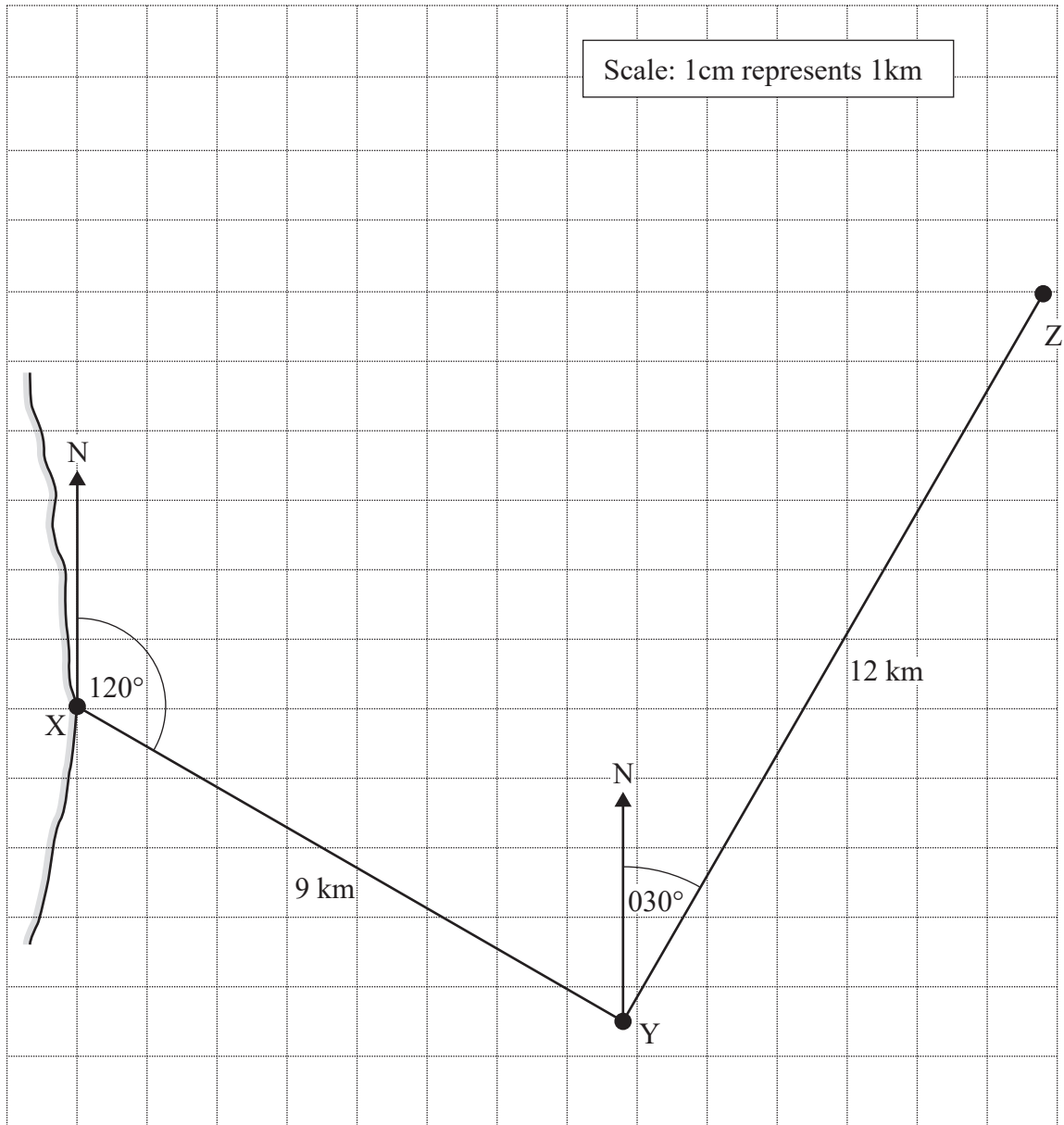
The ship then turns and travels directly back from Z to X.

Use a ruler and protractor to work out the distance and bearing of the journey
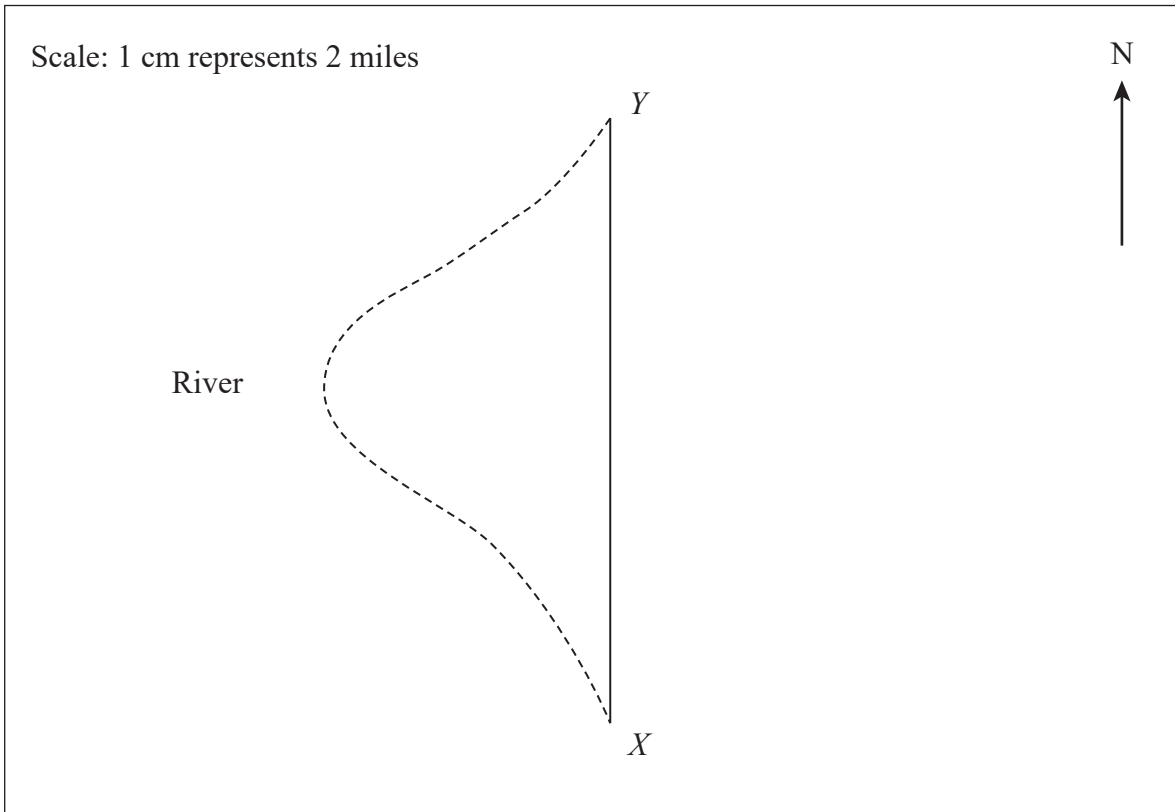
from Z to X

Distance .... km

Bearing.. °

(3)

(Total for Question 3 is 3 marks)

4   An helicopter flies due North from *X* to *Y*.
        The distance from *X* to *Y* on the river is 24 miles.

Scale: 1 cm represents 2 miles

N

Y

River

X

(a)   How much further is it from *X* to *Y* on the river than by helicopter?

.... miles

(3)

(b) *Z* is 12 miles north-east of *X*.

(i)   Write down the three-figure bearing of *Z* from *X*.

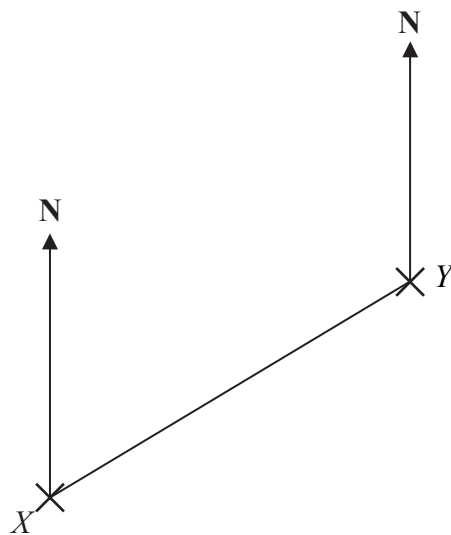........................ º

(1)

(ii)   Mark with a cross the point *Z* on the diagram.

(2)

(Total for Question 4 is 6 marks)

5   The diagram shows the positions of two telephone masts, *X* and *Y*, on a map.

N

N

✕ *Y*

✕
X

(a) Measure the bearing of *Y* from *X*.

.... °

(1)

Another mast *Z* is on a bearing of 160 from *Y*.

On the map, *Z* is 4 cm from *Y*.

(b) Mark the position of *Z* with a cross (✕) and label it *Z*.

(2)

(Total for Question 5 is 3 marks)

6 The diagram shows part of a map.
It shows the positions of a lighthouse and a boat.

N

lighthouse ✗

N
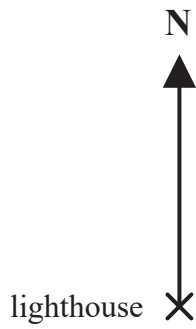
✗ boat

The scale of the map is 1:10 000

(a) Work out the real distance between the lighthouse and the boat.
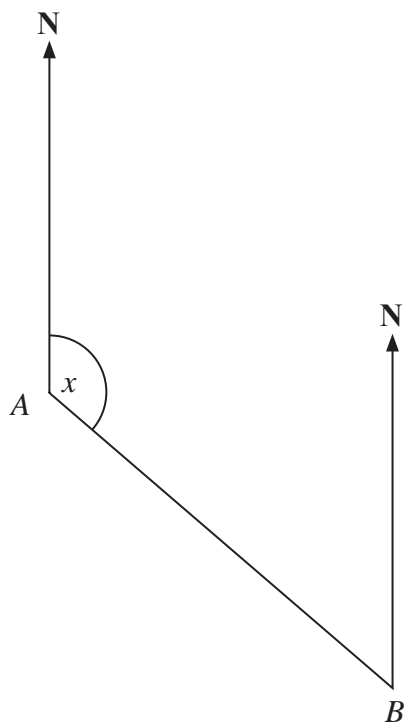Give your answer in metres.

.... m   **(2)**

(b) Find the bearing of the lighthouse from the boat.

....
(1)

(Total for Question 6 is 3 marks)

7 The diagram shows the position of two ports, *A* and *B*.
A ship sails from port *A* to port *B*.

N

N

x

A

B

Scale: 1 cm represents 50 km

(a) Measure the size of the angle marked *x*.

.... ° **(1)**

(b) Work out the real distance between port *A* and port *B*.
Use the scale 1 cm represents 50 km.

.... km **(2)**

Port *C* is 350 km on a bearing of 060° from port *B*.

(c) On the diagram, mark airport *C* with a cross (×).
Label it *C*.

(2)

(Total for Question 7 is 5 marks)