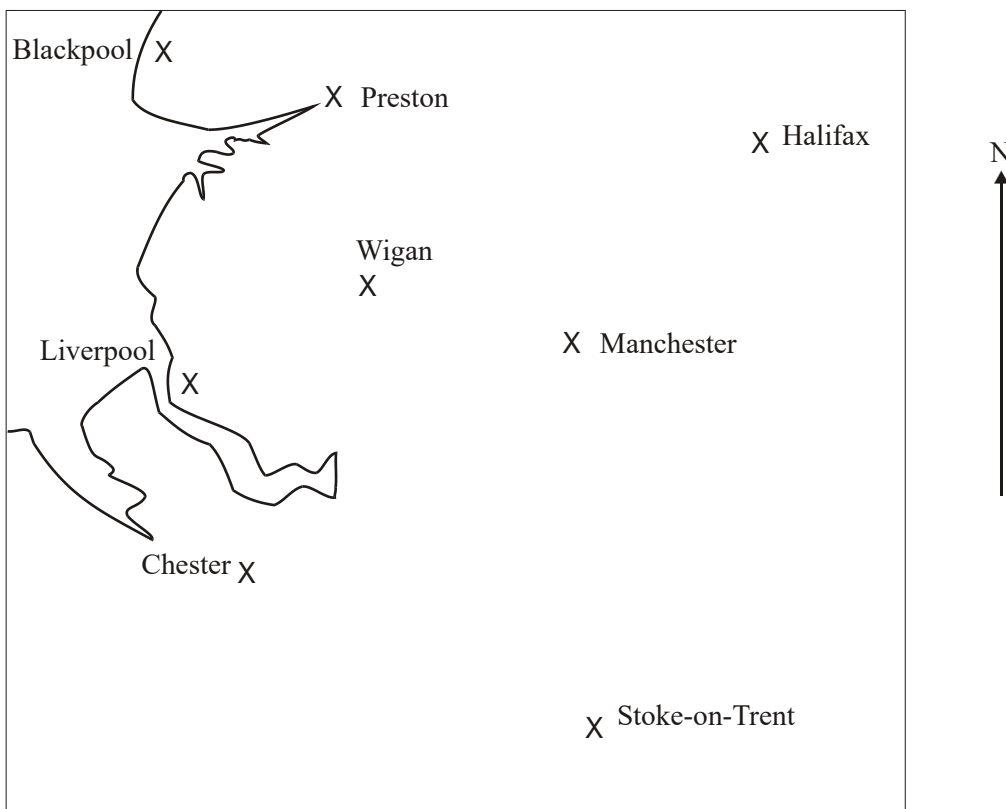


1. This is a map of part of Northern England.



Scale: 1 cm represents 10 km

A plane flies in a straight line from Preston to Stoke-on-Trent.

- (a) How far does it fly?
Give your answer in kilometres.

..... km

(2)

- (b) Measure and write down the bearing of Preston from Manchester.

.....°
 (1)
 (Total 3 marks)

2. In the diagram, Point A marks the position of Prestwich.
 The position of Radcliffe is to be marked on the diagram as *Point B*.

- (a) On the diagram, mark with a cross (×) the position of *B*, given that
 B is on a bearing of 320° from A and
 B is 6 cm from A.



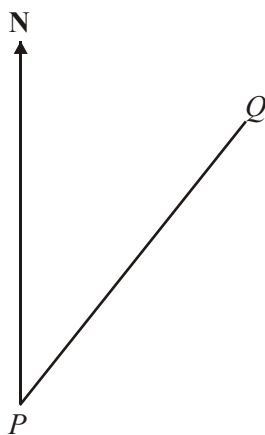
(2)

The scale of the diagram is 1 : 50 000

- (b) Work out the real distance 6 cm represents.
Give your answer in kilometres.

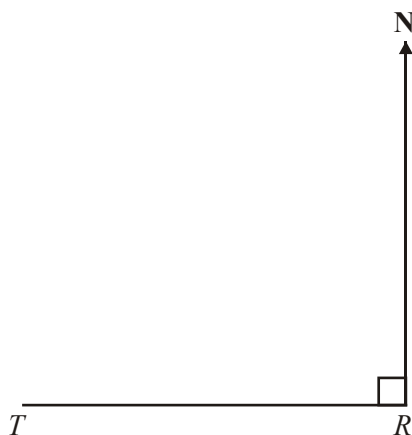
..... km
(3)
(Total 5 marks)

3.



- (a) Measure and write down the bearing of Q from P.

.....°
(1)



(b) Find the bearing of T from R .

.....°

(1)
(Total 2 marks)

1. (a) 90 2
B2 for 90 ± 2 (B1 for 9 ± 0.2)
- (b) 317 1
B1 for 317 ± 4
- [3]**

2. (a) Point B marked 2
B1 correct bearing of $320^\circ \pm 2^\circ$
B1 correct length of $60 \text{ mm} \pm 2 \text{ mm}$
- (b) $6 \times 50000 = 300000$
 $300000 \div 100000$
 $= 3 \text{ km}$ 3
M2 $6 \times 50000 \div 100000$
(M1 for 6×50000 or $\div 100000$ or $60... \times 50000$)
A1 cao
SC B2 for 3 followed by one or more 0s
- [5]**

3. (a) 045 1
B1 for $045^\circ \pm 2^\circ$

(b) 270

1

Bl cao

[2]

1. Mathematics A Paper 2

In the first part, the majority of candidates made the measurement accurately and used the scale correctly, although a few performed only the first step. There were very few correct bearings in the second part, many candidates believing that distances were still required. This led to answers of 4.5 and 45.

Mathematics B Paper 15

In the first part, the majority of candidates made the measurement accurately and used the scale correctly, although a few performed only the first step. There were very few correct bearings in the second part, many candidates believing that distances were still required. This led to answers of 4.5 and 45.

2. Many candidates obtained full marks in part (a). The bearing caused problems for some, with many drawing the bearing in an anticlockwise direction, or used the incorrect scale on their protractor. In part (b) very few gained full marks; the majority obtained an answer involving 3 and a number of 0s, demonstrating some confusion over units.
3. Candidates were clearly not able to correctly answer a question on bearings with most preferring to measure the angle given and provide 45° and 90° as their two answers. Clearly the concept of a 3-figure bearing was beyond most with only 1% of the candidates providing the correct answer in part (a) and 3% writing 270° in part (b). More disturbing was the number of candidates who did not read the questions properly and when they saw Q and P in part (a) and T and R in part (b), they immediately decided to measure these as distances with 5.5 and 5.5 cm being a very common answer to both parts of the question.