

SCORE

# Geometry

With Classified  
answer book

8

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## 22- Bearings

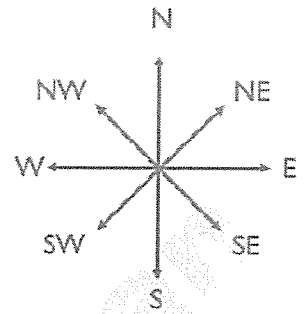
1. Is each statement true or false? Tick your answers.

Turning clockwise, the angle between North and West is  $270^\circ$

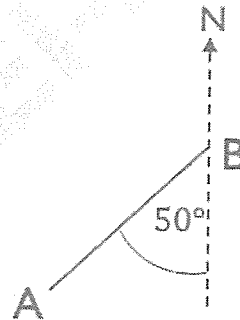
True

False

Turning anticlockwise, the angle between West and North-West is  $45^\circ$

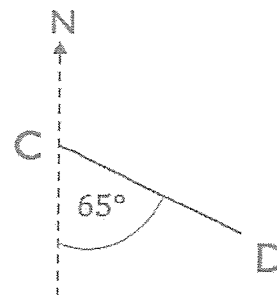
2. Work out the bearing of A from B.



*Diagram not drawn accurately*

\_\_\_\_\_°

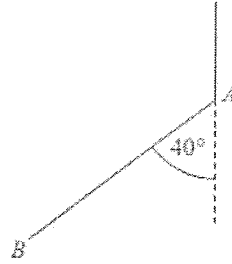
3. Work out the bearing of D from C.



*Diagram not drawn accurately*

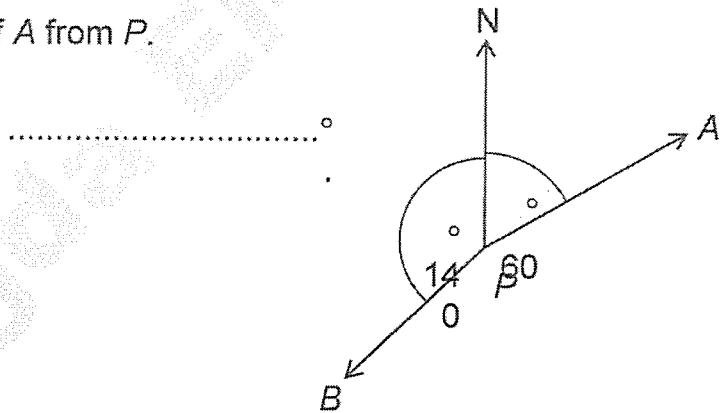
\_\_\_\_\_°

4. Work out the bearing of  $B$  from  $A$ .



..... °

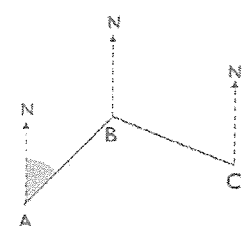
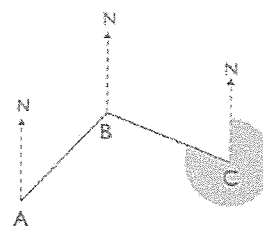
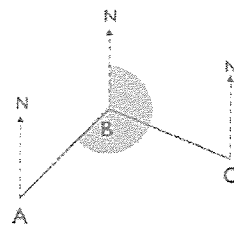
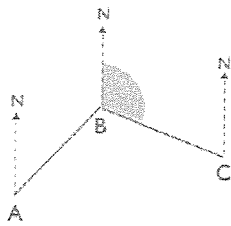
5. (a) Write down the bearing of  $A$  from  $P$ .



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

..... °

6. Match each diagram to the bearing described.



The bearing of A from B

The bearing of B from A

The bearing of B from C

The bearing of C from B

7. Measure the bearing of R from Q.

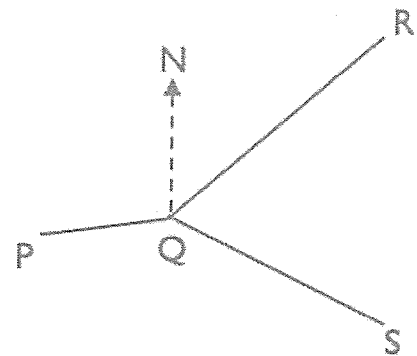
\_\_\_\_\_°

Measure the bearing of S from Q.

\_\_\_\_\_°

Measure the bearing of P from Q.

\_\_\_\_\_°



8. A helicopter flies due West from its base for 8 kilometres to rescue an injured person. It then flies 6 kilometres due North to the nearest hospital. Draw a scale diagram of the journey using the scale 1 cm to represent 2 km.

●  
Base

What is the shortest distance the helicopter needs to fly to return to base?

\_\_\_\_\_ km

Find the bearing of the base from the hospital.

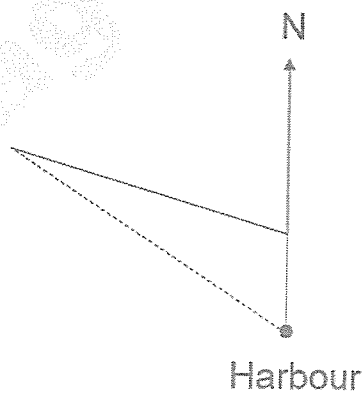
\_\_\_\_\_ °

9. A hiker walks 3 km due East and then turns and walks 5 km due South.

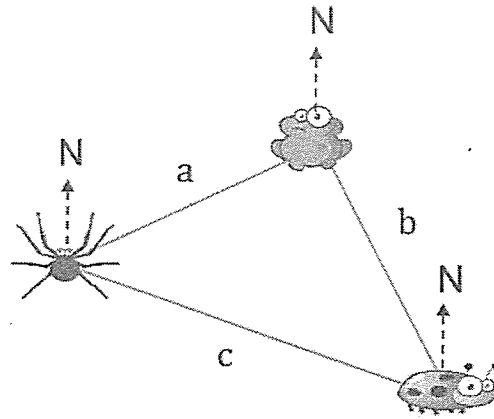
Work out the bearing of the hiker from their starting point.

10. A boat starts from harbour and travels 30 km North, then turns to travel 12 km North West.

Complete the diagram and work out how far does the boat need to travel to get back to the harbour?

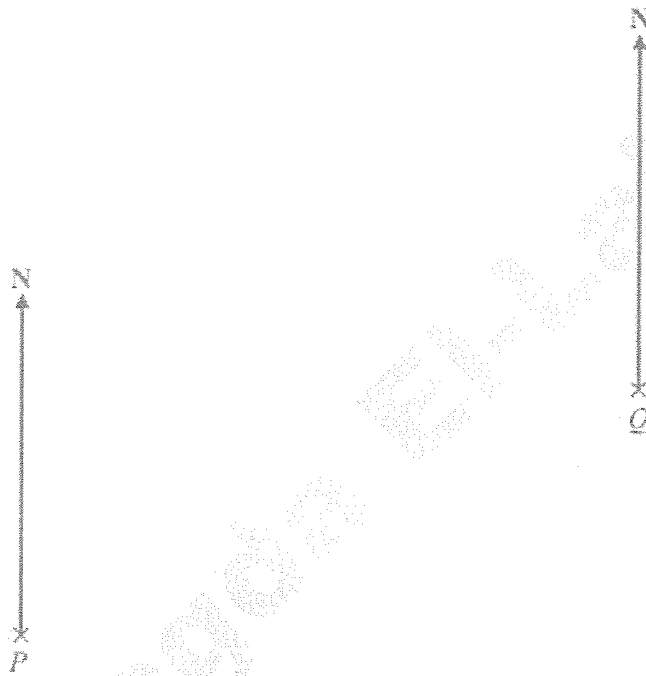


11.



The bearing of the frog from the spider is  $062^\circ$   
The bearing of the ladybird from the spider is  $113^\circ$   
The bearing of the frog from the ladybird is  $315^\circ$   
Draw a sketch of the diagram and find all the interior angles of the triangle in the diagram.  
Given that the distance from the spider to the frog is 98 cm, find lengths  $\square$  and  $\square$

12. The diagram shows the position of two boats,  $P$  and  $Q$ .



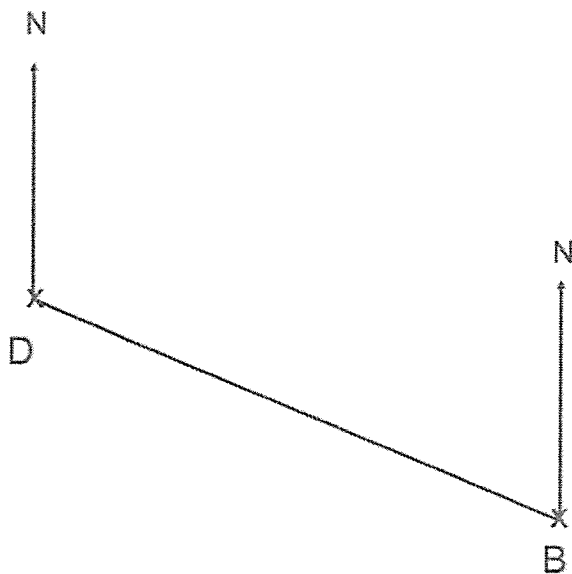
The bearing of a boat R from boat P is  $060^\circ$

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 (X). Label it R.



13. The diagram shows the position of a boat B and a dock D.



The scale of the diagram is 1 cm represents 2 km.

(a) Work out the actual distance between the dock and the boat.

.....km

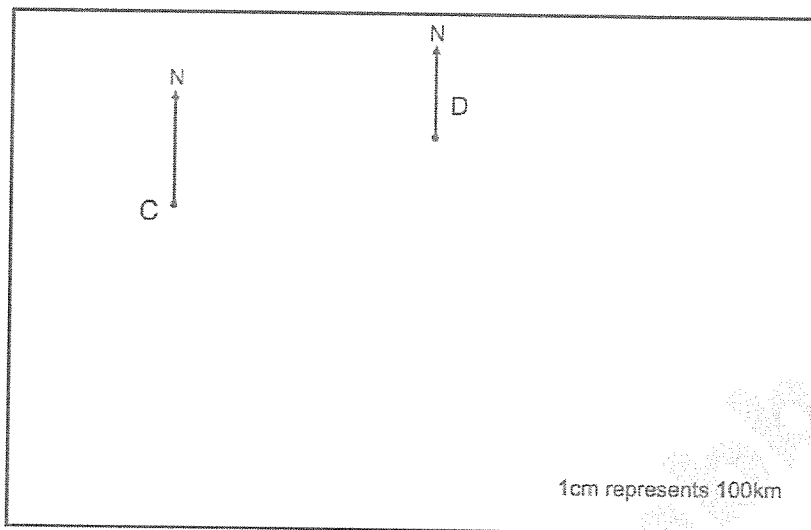
(b) Measure the bearing of the boat B from the dock D.

.....°

A yacht Y is 8 km from the boat B on a bearing of  $050^\circ$

(c) On the diagram, mark the position of yacht Y with a cross (x). Label it Y.

14. The diagram shows the position of two cities C and D.



(a) Work out the actual distance of D from C. ....km

(b) Find the three figure bearing of D from C

.....°

E is South-East of C.

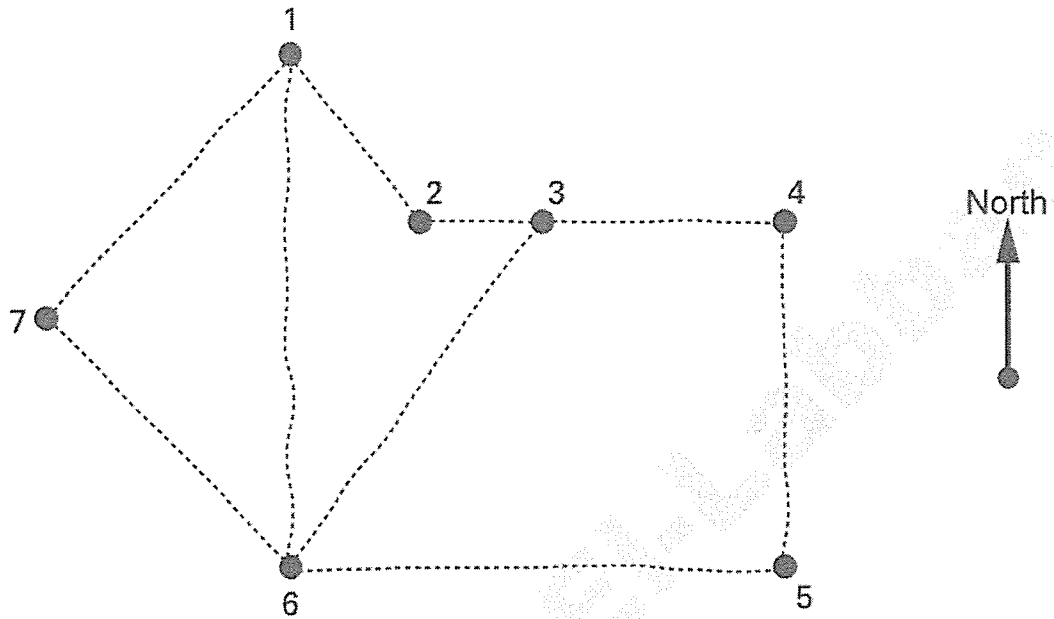
(c) Write down the bearing of E from C.

.....°

E is also on a bearing of  $190^\circ$  from D. (d)

Mark the position of E on the diagram.

15. The map shows the positions of seven towns, numbered 1 to 7.  
The dashed lines show the roads between the towns.



- (a) A girl cycled from town 1

She went **south** to a town.

Then she went **east** to a different town, where she stopped for a drink. In which town did she stop for a drink ?

town

(b) Complete the missing directions in the boxes below.

Start at town 5, go north to town 4,  
then go . . . . . to town 3 . . . . .

Start at town 6, go north-west to town 7,  
then go . . . . . to town 1 . . . . .

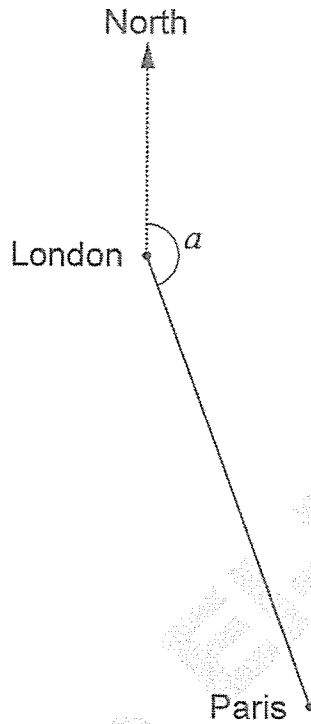
(c) Steve lives in one of these towns.

Town 3 is west of where Steve lives. In

which town does Steve live ?

town . . . . .

16. The scale drawing shows the positions of London and Paris.



- (a) From London to Paris, the angle from north is angle  $a$   
Measure accurately angle  $a$

$a = \dots\dots\dots^\circ$

- (b) On the scale drawing, 1 cm represents 50 km.

What is the distance, in km, from London to Paris?

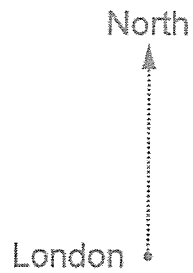
$\dots\dots\dots$  km

(c) A newspaper printed this information about London and Madrid.

From London to Madrid, the angle from north is  $195^\circ$   
clockwise. Madrid is 1300 km from London.

Show this information on a scale drawing.

Use the scale 1 cm represents 200 km. The  
position of London is shown for you.



17. The scale drawing shows the position of two schools, A and B.



The scale is 1 : 200 000

- (a) Work out the real-life distance between school A and school B.  
Give your answer in kilometres.

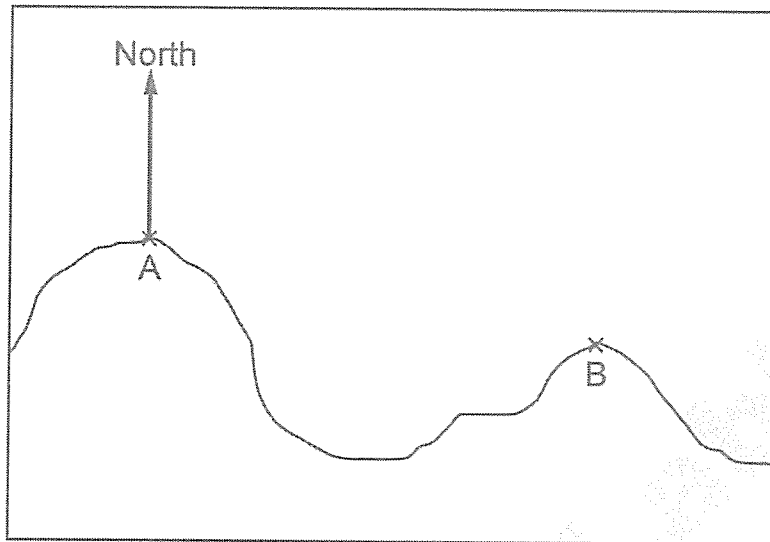
..... km

- (b) School C is on a bearing of

085° from school A,  
305° from school B.

Use your protractor to mark the position of school C on the scale drawing.

18. The map shows the positions of two lighthouses, A and B.  
The map is drawn to a scale of 1 : 50 000



Scale 1 : 50 000

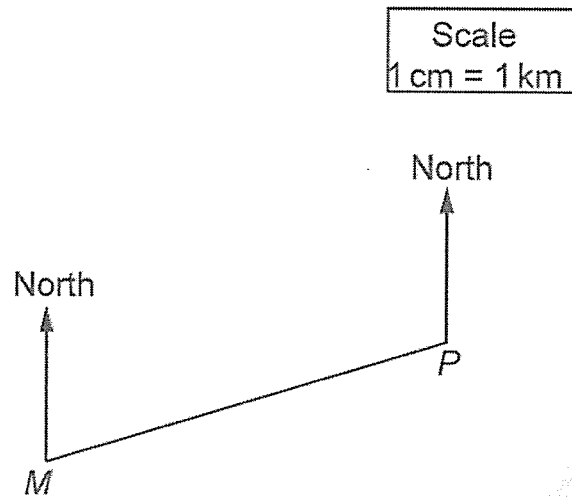
The bearing of ship S from lighthouse A is  $080^\circ$ .

The distance of ship S from lighthouse B is 1.8 km.

Show the **two** possible positions for ship S on the map.



19. The diagram shows the position of two schools,  $M$  and  $P$ .  
The scale used in the diagram is 1 cm is equal to 1 km.



- (a) What is the bearing of school  $P$  from school  $M$  ?

.....°

- (b) School  $Q$  is on a bearing of  $120^\circ$  from school  $P$ .  
School  $Q$  is 4 km away from school  $P$ .  
Put a cross ( $\times$ ) on the diagram to show the position of school  $Q$ .  
Label it  $Q$ .
- (c) Cheng lives exactly 3 km away from school  $M$ .  
Draw on the diagram the locus of points showing where Cheng lives.