

Bearings

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NAME _____

DATE _____

- 1 The diagram shows a harbour H and a boat B .

 CALCULATOR 1 MARK



B is west of H .

State the bearing of B from H .

- 2 The diagram shows a school S and a mast R . The bearing of R from S is marked on it.

 CALCULATOR 1 MARK



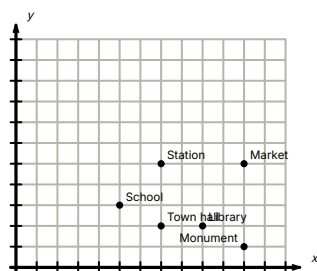
State the compass direction of R from S .

- 3 Here is a map of a town.

 EITHER PAPER 5 MARKS

Each square of the grid is 1 cm by 1 cm.

Scale: 1 cm represents 136 m



North is at the top of the map.

- (a) Which place is exactly south east of the station?

Circle your answer.

library, market, monument, school, town hall

- (b) Circle the three-figure bearing of the town hall from the station.

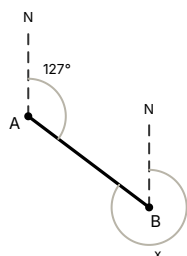
000° 090° 180° 270°

- (c) What is the distance, in metres, from the market to the station?

- (d) Why might the shortest walking distance from the market to the station be greater than your answer to part (c)?

- 4 The diagram shows two points A and B , with a north line drawn at each of them.

 CALCULATOR 2 MARKS

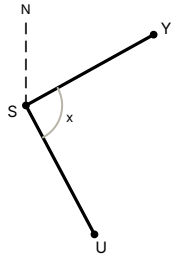


The bearing of B from A is 127° .

Work out the bearing of A from B . This is the angle marked x .

- 5 A coastguard at S can see a yacht at Y and a buoy at U .

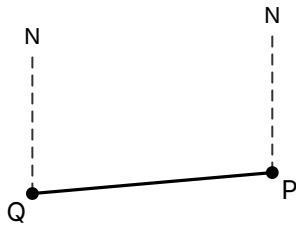
 CALCULATOR 2 MARKS



The bearing of Y from S is 061° .

The bearing of U from S is 152° .

Work out the size of the angle marked x .



- (a) Mateo wants to measure the bearing of P from Q .

Mateo draws the line QP and a north line at Q , then measures the angle clockwise from the north line to the line QP . The angle is 85° .

Mateo says that the bearing of P from Q is 085° .

Is Mateo's method correct? Give a reason for your answer.

- (b) On a different map, the bearing of D from C is 315° .

Yara says, " D is south east of C ."

Is Yara correct? Give a reason for your answer.

- (c) A map of an island is drawn on a grid of squares of side 2 cm. An airport, E , is marked on the map.

Scale: 1 cm represents 14 km.

A plane flies due south from the airport. On the map the coast is 5 squares due south of E .

How far does the plane fly until it reaches the sea?

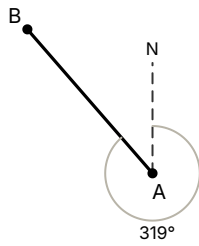
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- 7 A helicopter travels in a straight line from the hospital to the island on a bearing of 117° .

It then travels straight back from the island to the hospital.

Calculate the bearing of the return journey.

- 8 Yusuf cycles from A to B on a bearing of 319° .

 CALCULATOR 2 MARKS



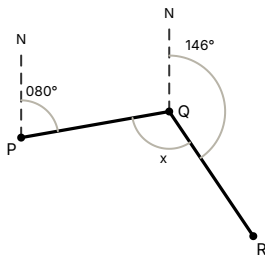
At B he turns 90° anticlockwise and carries straight on.

Find the bearing he is cycling on now.

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- 9 A ferry sails from P to Q on a bearing of 080° .

 CALCULATOR 4 MARKS

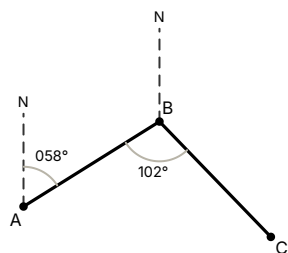
It then sails from Q to R on a bearing of 146° .



- (a) Find the size of angle PQR , marked x on the diagram.
- (b) Find the angle it turns through at Q .
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- 10 The diagram shows the route of a yacht. It sails from A to B , and then from B to C .

 CALCULATOR 3 MARKS



The bearing of B from A is 058° , and angle $ABC = 102^\circ$.

Calculate the bearing of C from B .

1	270°	2	south
3	(a) Monument (b) 180° (c) 544 m (d) The answer to part (c) is the straight-line distance, but a walk has to follow roads and paths, which cannot go in a straight line between the two places, so the route is longer.	4	307°
5	91°	6	(a) Yes: a bearing of P from Q is measured clockwise from the north line at Q, and that is what Mateo did (b) No: a bearing of 315° points north west (c) 140 km
7	297°	8	229°
9	(a) 114° (b) 66°	10	136°