Planner

Bearings

- Describing a three-figure bearing
- Measuring three-figure bearings
- Drawing diagrams involving three-figure bearings

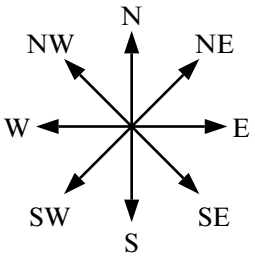
Keywords

You should know

explanation 1

1 Write the three-figure bearing for each direction.

a South **b** East **c** West



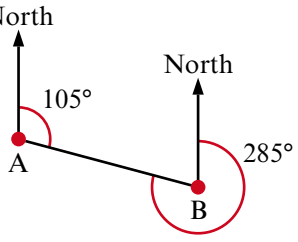
2 Explain why the three-figure bearing for North East is 045°.

3 Write the three-figure bearing for each direction.

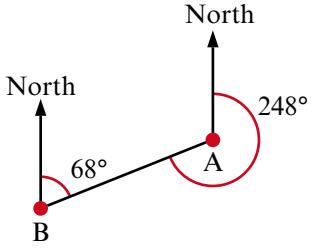
a South East **b** South West **c** North West

4 For each diagram, write the three-figure bearing of point B from point A.

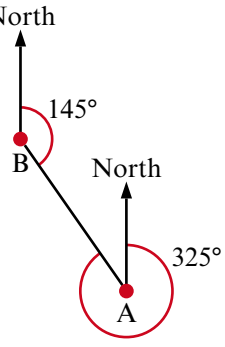
a



b



c



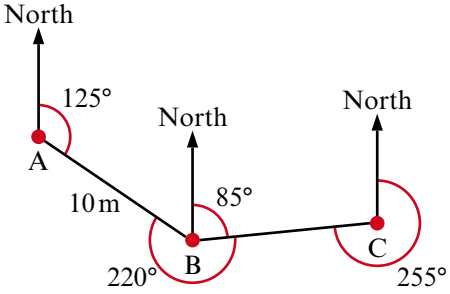
5 Look at the diagram.

a What is the bearing of B from A?

b What is the bearing of B from C?

c What is the bearing of C from B?

d What is the bearing of A from B?

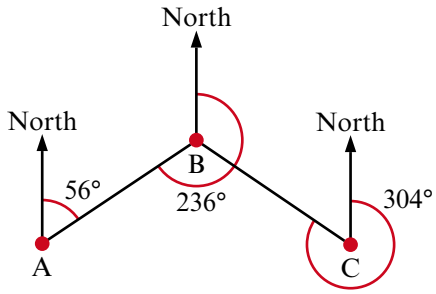


6 Look at the diagram.

a Describe the bearing that is 056°.

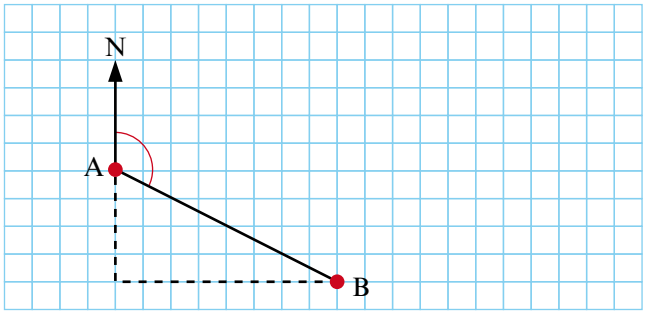
b Describe the bearing that is 236°.

c Describe the bearing that is 304°.



explanation 2 online

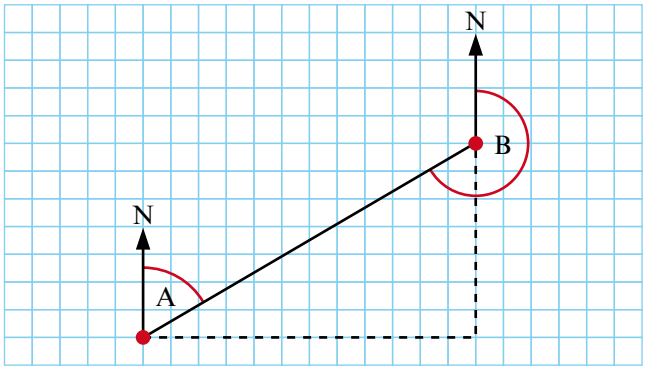
7 On 5 mm squared paper, plot points A and B so that B is 4 squares below and 8 squares to the right of A. Add a North line at A.



a Measure the length AB. Give your answer to the nearest millimetre.

b Measure the bearing of B from A.

8 On 5 mm squared paper, plot points A and B so that B is 7 squares above and 12 squares to the right of A. Add North lines at A and B.



a Measure the length AB. Give your answer to the nearest millimetre.

b Measure the bearing of B from A.

c Measure the bearing of A from B.

9 On 5 mm squared paper, plot points X and Y so that Y is 6 squares below and 3 squares to the right of X.

a Measure the length XY. Give your answer to the nearest millimetre.

b Measure the bearing of X from Y.

c Measure the bearing of Y from X.

10 On 5 mm squared paper, plot points P and Q so that P is 5 squares above and 6 squares to the right of Q.

a Measure the length PQ. Give your answer to the nearest millimetre.

b Measure the bearing of Q from P.

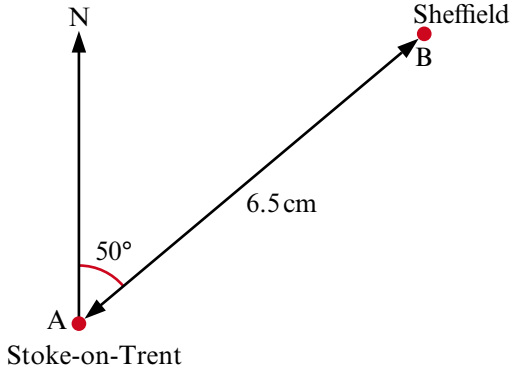
c Measure the bearing of P from Q.

explanation 3

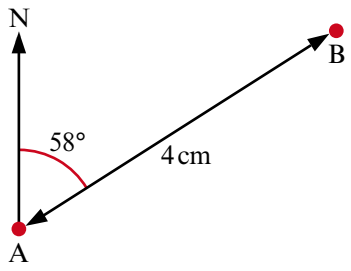
11 On a map of England, Sheffield is on a bearing of 050° from Stoke-on-Trent. The distance between them is approximately 65 km.

a Plot two points A and B such that they are 6.5 cm apart and the bearing of B from A is 050°.

b Use your diagram to measure the bearing of Stoke-on-Trent from Sheffield.



12 Look at the diagram.



a Plot two points A and B such that they are 4 cm apart and the bearing of B from A is 058°.

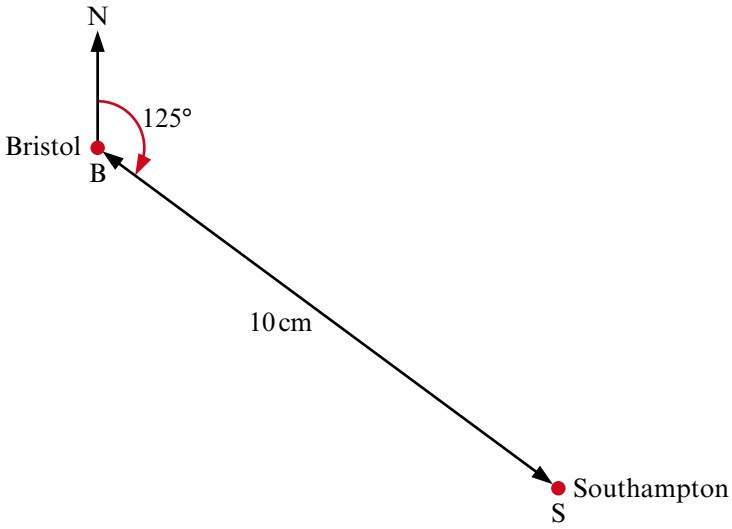
b Measure the bearing of A from B.

c Point C is on a bearing of 162° from B and BC is 7 cm. Plot point C.

d Draw the line AC and measure the distance AC to the nearest millimetre.

e Measure the bearing of C from A.

13 Bristol and Southampton are approximately 100 km apart and the bearing of Southampton from Bristol is 125°.



a Plot two points B and S such that they are 10 cm apart and the bearing of S from B is 125°.

b Use your diagram to measure the bearing of Bristol from Southampton.

Reading is on a bearing of 025° from Southampton and the distance between them is approximately 65 km.

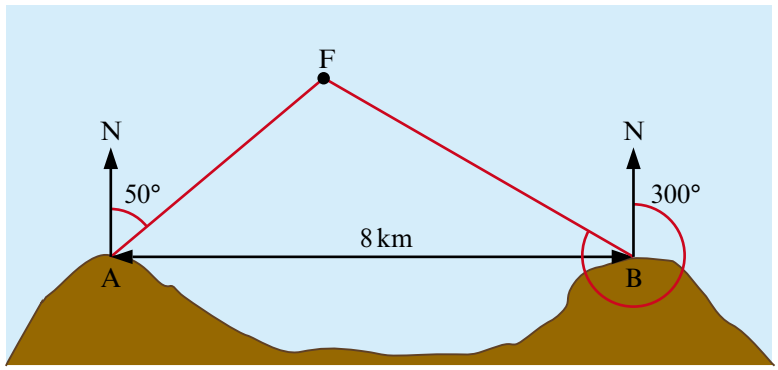
c Add Reading to your diagram using 6.5 cm to represent the 65 km.

d Use your diagram to measure the bearing of Bristol from Reading.

14 The sketch shows two coastguard stations, A and B.

Station B is 8 km due East of Station A.

A distress flare F is sighted on a bearing of 050° from station A and on a bearing of 300° from station B.



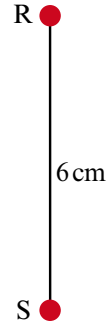
a Using 1 cm for 1 km, plot A and B and find the position of the flare, F.

b The station closest to the flare will send a rescue ship.
Which station should send a rescue ship? Explain how you know.

c Another boat, C, is 5 km from A on a bearing of 015°.
Mark boat C on your diagram

d How far is boat C from the flare?
What is the bearing of the distress flare from the boat C?

15 Two points R and S are 6 cm apart. R is due North of S.
A third point T is on a bearing of 045° from R and on a bearing of 022° from S.



a Plot R and S and work out the position of T.
Mark the angles on your diagram.

b Explain how you know that angle TRS = 135° without measuring.

c Explain how you know that angle RTS = 23° without measuring.

***d** Explain how you can use alternate angles to help work out that the bearing of R from T is 225°. Use your method to work out the bearing of S from T without measuring.