GCSE Maths: Bearings: measuring, drawing and back bearings (Foundation): answers

GCSE Maths - Loci, Bearings and Vectors - Foundation - Lesson 22.6

Answers. Final answers to the worksheet questions. Full step-by-step solutions for every question are free at **websink.site/gcse/maths/ch22-constructions-loci-bearings-vectors/foundation/bearings-measuring-drawing-and-back-bearings/**

Exercise 22G Bearings: reading, drawing and back bearings

Non-calculator

1 Write the bearing of each compass direction.

(a) North

Answer: 000°

(b) East

Answer: 090°

(c) South

Answer: 180°

(d) West

Answer: 270°

(e) North-east

Answer: 045°

(f) South-west

Answer: 225°

2 Write each angle as a three-figure bearing.

(a) 8°

Answer: 008°

(b) 72°

Answer: 072°

(c) 5°

Answer: 005°

(d) 120°

Answer: 120°

3 Write down the bearing shown by each red line.

(a)

Answer: 035°

(b)

Answer: 110°

(c)

Answer: 205°

(d)

Answer: 318°

4 Draw each line. Use a protractor to measure the bearing from the north line at P. Label the end of each line Q.

(a) From P, a line 6 cm long on a bearing of 060°.

Answer: Line 6 cm drawn at 060° from P

(b) From P, a line 6 cm long on a bearing of 135°.

Answer: Line 6 cm drawn at 135° from P

(c) From P, a line 6 cm long on a bearing of 250°.

Answer: Line 6 cm drawn at 250° from P

(d) From P, a line 6 cm long on a bearing of 300°.

Answer: Line 6 cm drawn at 300° from P

5 The bearing of Q from P is given. Work out the bearing of P from Q.

(a) 040°

Answer: 220°

(b) 125°

Answer: 305°

(c) 200°

Answer: 020°

(d) 305°

Answer: 125°

(e) 090°

Answer: 270°

(f) 270°

Answer: 090°

6 Write down the bearing for each statement.

(a) B is due east of A. Bearing of B from A.

Answer: 090°

(b) B is due east of A. Bearing of A from B.

Answer: 270°

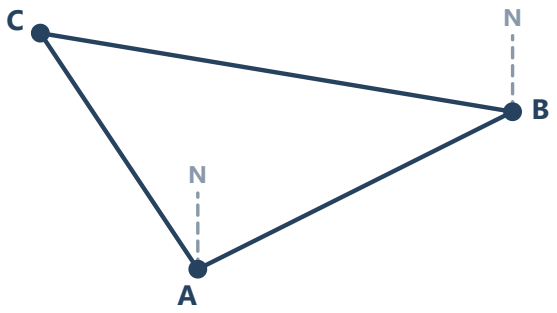
(c) C is due south of A. Bearing of C from A.

Answer: 180°

(d) C is due south of A. Bearing of A from C.

Answer: 000°

7 **The diagram shows the positions of three villages A, B and C, drawn accurately. Use a protractor to measure each bearing.**



(a) The bearing of B from A.

Answer: 063° (accept 061° to 065°)

(b) The bearing of C from A.

Answer: 326° (accept 324° to 328°)

(c) The bearing of C from B.

Answer: 279° (accept 277° to 281°)

8 **Tom writes the bearing of a town as 5°. Explain why this is not a correct bearing, and write it correctly.**

Answer: 005° (three figures)

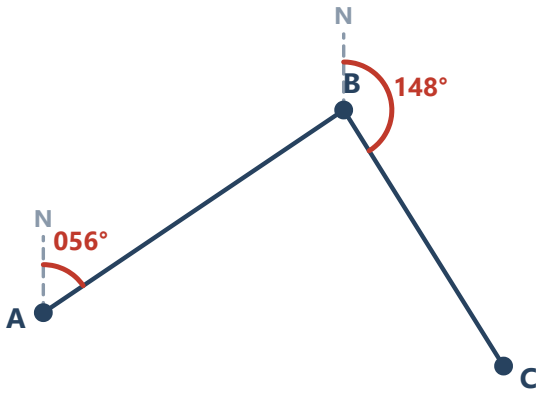
9 **The bearing of B from A is 130°. Show that the bearing of A from B is 310°.**

Answer: 130 + 180 = 310

10 **The bearing of a ship from a lighthouse is 200°. Work out the bearing of the lighthouse from the ship.**

Answer: 020°

11 **The bearing of B from A is 056°. The bearing of C from B is 148°. Work out the size of angle ABC.**

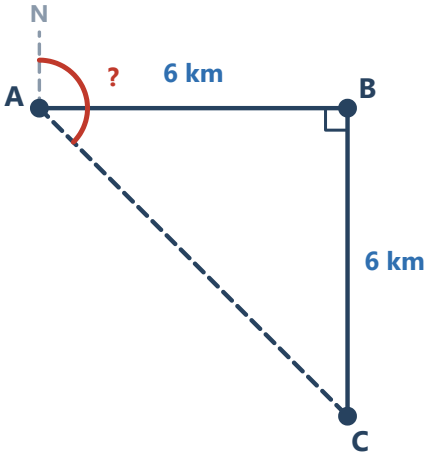


Answer: 88°

12 Three points A, B and C lie on a straight line, with B between A and C. The bearing of B from A is 072°. Work out the bearing of A from C. Give a reason for your answer.

Answer: 252°

13 A school, B, is 6 km due east of a station, A. A park, C, is 6 km due south of B. Work out the bearing of C from A.



Answer: 135°

14 **Challenge.** The bearing of A from B is **three times** the bearing of B from A. Work out the bearing of B from A.

Answer: 090°

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