

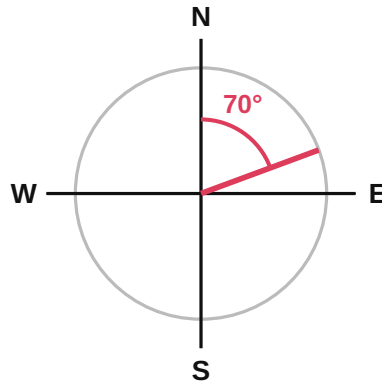
Boost Free Lessons - Year 10 Maths

Lesson 15: Bearings

Name: _____ Grade: _____ Date: _____

Worked Example 1

A ship sails on a bearing of 070° . Describe its direction.



1. True bearings are always measured **clockwise** from north.
2. They are always written with three digits, so 70° is written as 070° .
3. 070° is 70° clockwise from north, which places it between north and east.
4. For comparison, due east is 090° , so this direction is slightly north of east.

070° , which is 70° east of north

Worked Example 2

Town B is on a bearing of 130° from town A. Find the bearing of A from B.

1. The reverse direction is called the back bearing, and it always differs by 180° .
2. Since 130° is less than 180° , add 180° to it.
3. $130 + 180 = 310$.
4. If the original bearing had been more than 180° , you would subtract 180° instead.

310°

Remember: Bearings are measured clockwise from north and always written with three digits. To reverse a bearing, add 180° if it is under 180° , or subtract 180° if it is over.



Question 1: Write each compass direction as a three-figure bearing.

1. North

2. East

3. South

4. West

5. North-east

6. South-east

7. South-west

8. North-west



Question 2: Find the back bearing of each of the following.

1. 040°

2. 100°

3. 200°

4. 315°

5. 075°

6. 180°

7. 260°

8. 015°



1. A hiker walks on a bearing of 060° , then turns to a bearing of 150° . Through what angle did she turn?
2. A boat sails on a bearing of 090° , then returns along the same path. What bearing does it take on the way back?
3. A plane flies on a bearing of 225° . Which compass direction is this?
4. Town P is on a bearing of 310° from town Q. Find the bearing of Q from P.
5. A ship sails 8 km east, then 6 km north. Find the bearing of its finishing point from the start, to the nearest degree.





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Answers: Bearings

Question 1

- | | |
|----------------|----------------|
| 1. 000° | 5. 045° |
| 2. 090° | 6. 135° |
| 3. 180° | 7. 225° |
| 4. 270° | 8. 315° |

Question 2

- | | |
|----------------|----------------|
| 1. 220° | 5. 255° |
| 2. 280° | 6. 000° |
| 3. 020° | 7. 080° |
| 4. 135° | 8. 195° |

Question 3

1. 90°
2. 270°
3. South-west
4. 130°
5. 053°

