C28

Bearings

CHAPTER ASSIGNMENT · 8 MARKS

Name _____ Class _____ No. _____ Date _____

You need a ruler and a protractor. Take north to be a line straight up the page. Bearings are measured clockwise from north and written with three figures.

Practice questions from *Cambridge IGCSE Mathematics Core and Extended* (4th edition), Chapter 28 (Bearings), for classroom use. The Check yourself and Chapter quiz questions are Guru Jazzy's own.

Exercise 28.1 · Bearings and back bearings

28.1.1 Draw a diagram to show the following compass bearings and journey. Use a scale of 1 cm : 1 km. North can be taken to be a line vertically up the page. Start at point A. Travel a distance of 7 km on a bearing of 135° to point B. From B, travel 12 km on a bearing of 250° to point C. Measure the distance and bearing of A from C.

28.1.2 Given the following bearings of point B from point A, draw diagrams and use them to calculate the bearings of A from B.

(a) bearing 163°

(b) bearing 214°

28.1.3 Given the following bearings of point D from point C, draw diagrams and use them to calculate the bearings of C from D.

(a) bearing 300°

(b) bearing 282°

Student assessment 1

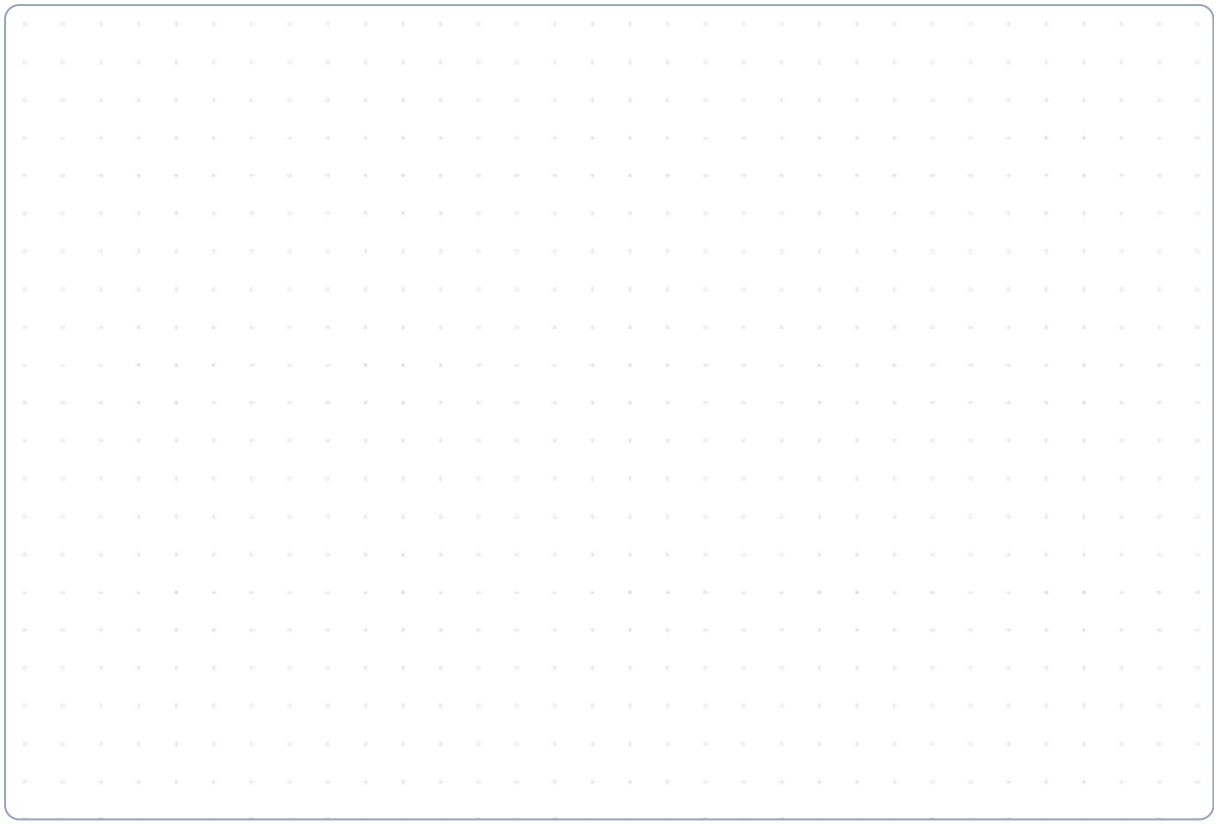
SA1.1 A climber gets to the top of Mont Blanc. He can see in the distance a number of ski resorts. He uses his map to find the bearing and distance of the resorts, and records them as shown below:

Resort	Distance	Bearing
Val d'Isère	30 km	082°
Les Arcs	40 km	135°
La Plagne	45 km	205°
Méribel	35 km	320°

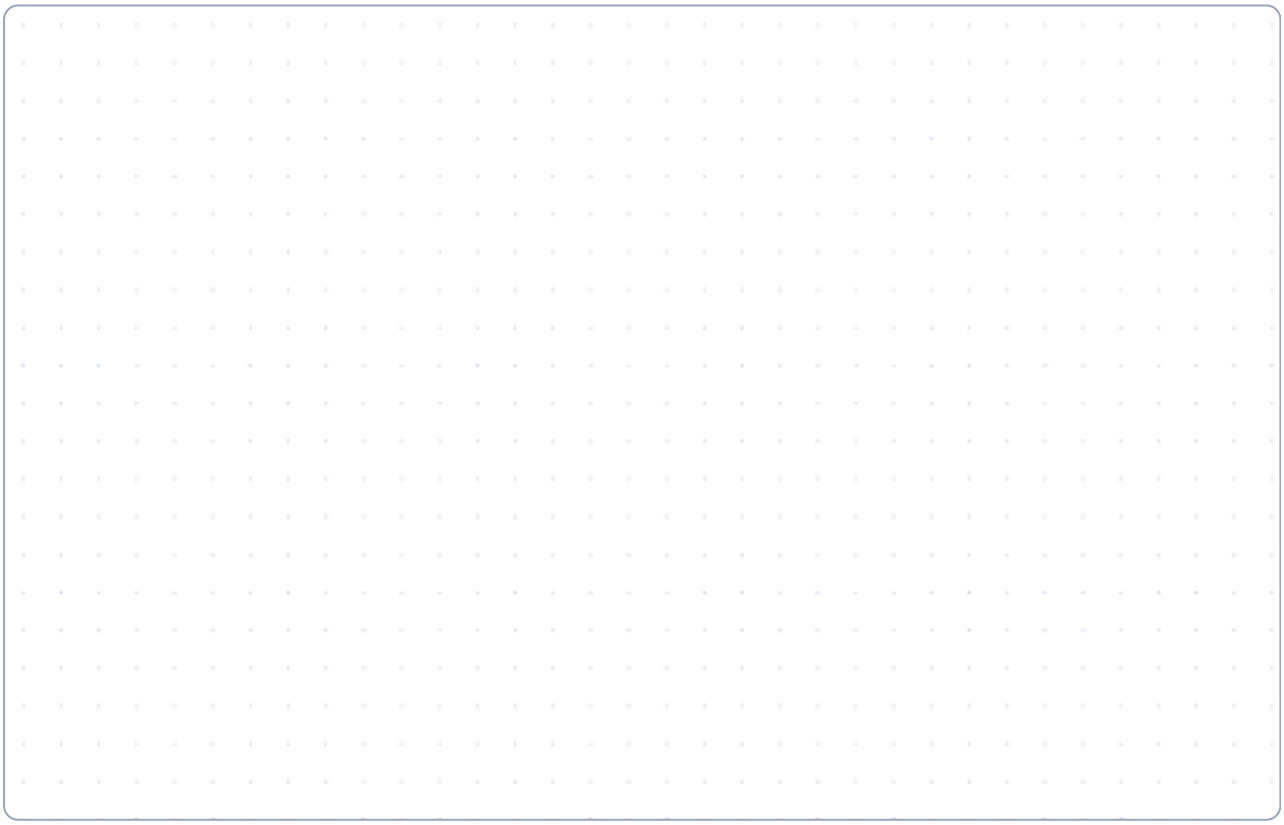
Choose an appropriate scale and draw a diagram to show the position of each resort. What are the distance and bearing of the following?

(a) Val d'Isère from La Plagne.

(b) Méribel from Les Arcs.



SA1.2 A coastal radar station picks up a distress call from a ship. It is 50 km away on a bearing of 345°. The radar station contacts a lifeboat at sea which is 20 km away on a bearing of 220°. Make a scale drawing and use it to find the distance and bearing of the ship from the lifeboat.



SA1.3 An aircraft is seen on radar at airport A. The aircraft is 210 km away from the airport on a bearing of 065°. The aircraft is diverted to airport B, which is 130 km away from A on a bearing of 215°. Choose an appropriate scale and make a scale drawing to find the distance and bearing of airport B from the aircraft.

Check yourself

C1 Write 8° and 90° as three-figure bearings. [2]

C2 The bearing of Q from P is 072°. Find the bearing of P from Q. [1]

C3 The bearing of Q from P is 298°. Find the bearing of P from Q. [1]

C4 A boat sails 3 km on a bearing of 090°, then 4 km on a bearing of 180°. Use a scale of 1 cm : 1 km to find how far it is from its start. [2]

C5 Explain in a sentence why a bearing and its back bearing always differ by 180°. [2]

Chapter quiz

Q1 From which direction, and which way round, are bearings measured?

A	B	C	D
North, anticlockwise	East, clockwise	North, clockwise	South, clockwise

Q2 How is a bearing of 45° written as a three-figure bearing?

A	B	C	D
450°	045°	004.5°	405°

Q3 What is the bearing of south west?

A	B	C	D
135°	180°	315°	225°

Q4 What is the bearing of west?

A	B	C	D
270°	090°	180°	360°

Q5 The bearing of B from A is 135°. What is the bearing of A from B?

A	B	C	D
045°	225°	135°	315°

Q6 The bearing of B from A is 245°. What is the bearing of A from B?

A	B	C	D
065°	115°	125°	425°

Q7 A ship sails on a bearing of 300°. What bearing takes it back?

A	B	C	D
030°	060°	120°	240°

Q8 A bearing and its back bearing always differ by how much?

A	B	C	D
90°	180°	270°	360°

Q9 The bearing of Q from P is 040°. What is the bearing of P from Q?

A	B	C	D
220°	140°	320°	040°

Q10 On a scale of 1 cm : 5 km, a leg measures 6 cm. How long is it really?

A	B	C	D
1.2 km	11 km	30 km	56 km

Q11 A boat goes 3 km on 090°, then 4 km on 180°. How far is it from its start?

A	B	C	D
5 km	7 km	1 km	12 km

End of assignment · Check your answers against the chapter at gurujazzy.com/subjects/o-level-mathematics/chapter-28-bearings/