The Panda Math Tutor

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Bearings

Student Worksheet

Questions & Working Space

IGCSE Mathematics

Name: _____

Date: _____

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Note

How to use this worksheet. These questions are built *strictly* on the *Bearings* notes: the three rules of bearings, compass points, measuring and drawing, angle rules with parallel North lines, back bearings, geometry of two-leg journeys, SOHC-AHTOA, the sine and cosine rules, and finding an unknown bearing.
Always draw a diagram. Even when a figure is printed for you, sketch the journey yourself and put a North arrow at *every* point you measure a bearing from. Most lost marks in this topic come from a missing North line.
Three-figure answers. Every bearing you write must have three digits — 007°, 064°, 310°. Give distances to 3 significant figures and bearings to the nearest degree unless told otherwise, and carry full calculator accuracy through the middle of a calculation.
Working space. Ruled lines follow each question. Harder questions have a teal **Hint** box; try the question first and use the hint only if you are stuck.
Checking your answers. Full step-by-step solutions, a marking scheme for the exam paper, and a quick answer key are in the separate booklet *"Bearings — Solutions & Answer Key."* Try each question honestly before you look.

1 Part I — Topic-by-Topic Exercises

1.1 Understanding Bearings

Exercise B1 *[Basic]*

Write each of the following as a correct three-figure bearing:

(a) 9° (b) 74° (c) 231°

Exercise B2 *[Basic]*

State the three rules that every bearing must obey.

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Exercise B3 *[Standard]*

A student writes: "The bearing of B from A is $58°$." Explain what is wrong with the way this has been written, and write it correctly.

Exercise B4 *[Standard]*

A ferry starts by facing North and then turns $126°$ clockwise. Write down the bearing on which it is now travelling.

Exercise B5 *[Intermediate]*

A walker faces North and then turns $47°$ **anticlockwise**. Find the bearing on which she is now facing.

Hint

Bearings are only ever measured clockwise, so an anticlockwise turn must be converted by subtracting from a full turn.

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