

A Near Miss

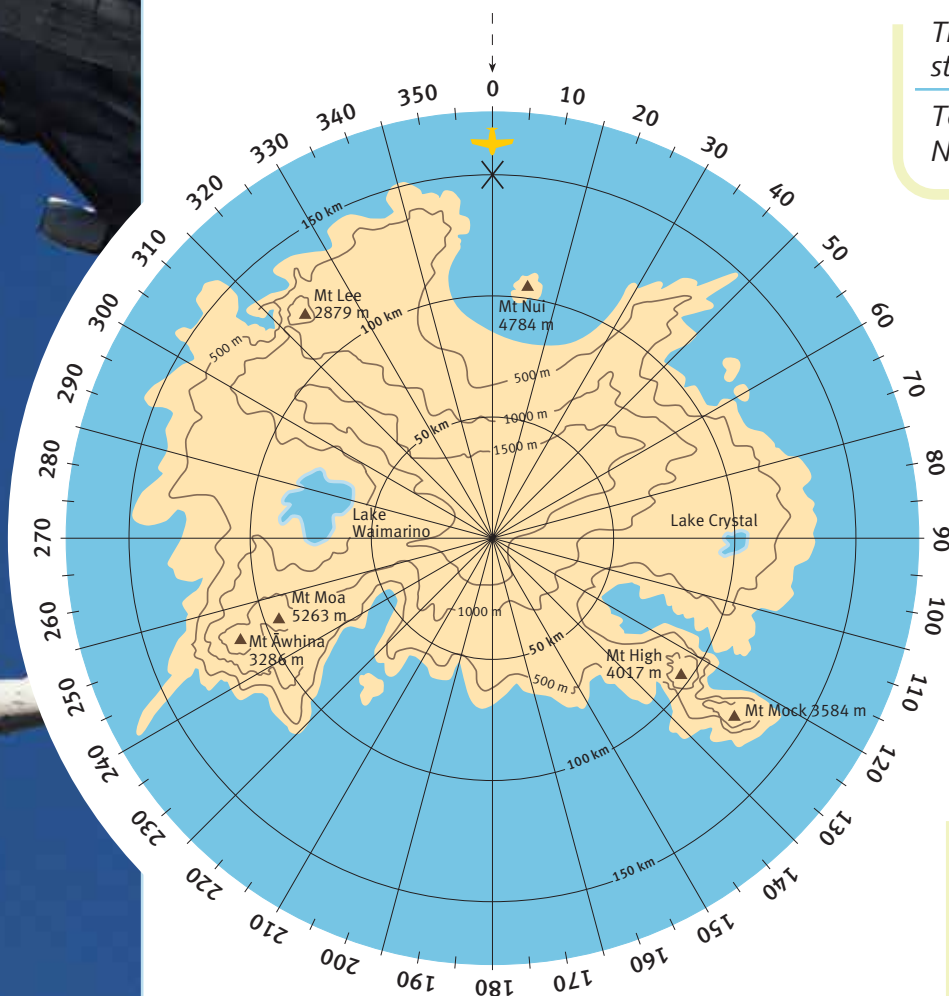
You need: a photocopy of the Terra Pacifica chart copymaster

ACTIVITY

Flight 537 is on a scenic flight. The pilot is flying on instruments, but he uses the visuals on his in-flight navigation computer to confirm the flight path. His first landmark is Mount Nui, which should be starboard of the plane.

- Use the data in the chart below to draw flight 537's flight path on your photocopy of the map of Terra Pacifica, beginning at X. (Be alert for any problems.)

Leg	Altitude	Direction and distance	Landmarks to check
1	8 000 m	Fly to the origin	Mount Nui on starboard
2	Descend to 3 500 m	Maintain bearing of 225° for 100 km	Mounts Moa and Āwhina on starboard
3	Maintain 3 500 m	Fly to the point that is 100 km from the origin and has a bearing of 135°	Mounts High and Mock to port in distance
4	Descend to 2 000 m	Maintain bearing of 315° for 100 km	Over origin
5	Maintain 2 000 m	Maintain bearing of 285° for 150 km	Lake Waimarino at port
6	Ascend to 2 500 m	Fly to the point that is 150 km from the origin and has a bearing of 320°	Mount Lee at starboard
7	Maintain 2 500 m	Maintain bearing of 140° for 150 km	Mount Lee still at starboard



The origin is the centre of the map; starboard is right; port is left.

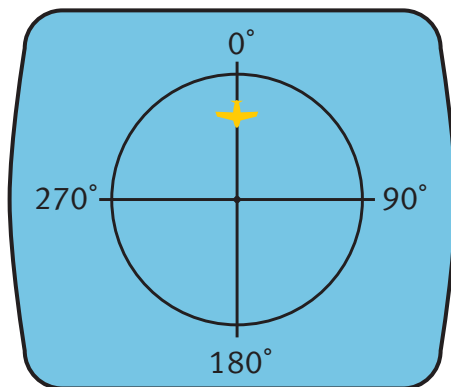
Terra Pacifica is not at the North Pole or the South Pole.

- When the pilot locates Mount Nui, he realises that something is wrong.
 - What does he notice?
 - What disaster is likely to happen if flight 537 continues on this flight path?

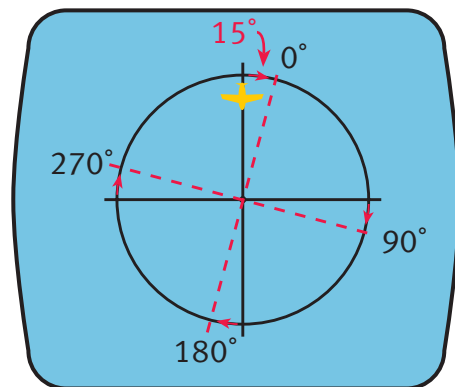
- The pilot radios Counter Catastrophe for urgent advice. Hawke, the aviation expert, springs into action and checks the flight path. He then checks the computer to see what's wrong.

Flight 537 is in trouble if it follows this flight path. Someone has put the wrong co-ordinates into the in-flight navigation computer.

Aha, all the bearings are out by 15° .



The crew are heading towards the origin.



But all their bearings are out by 15° .

There seems to be a problem with the aircraft's compass. How can Hawke fix the problem so that all the following legs are correct?

- Draw flight 537's new flight path on your copy of the map. (Use a different-coloured pen from the one you used for question 1.)

INVESTIGATION

Investigate the reasons for the Mount Erebus disaster, in which flight 901 crashed on 28 November 1979.

