



Navigator Activity Badge (Scout section)

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Complete the requirements in one of the following alternatives:

Alternative B - air

1. Given three headings and corresponding tracks, work out in each case the type and the amount of drift in degrees. Illustrate each case by a simple diagram.
2. Demonstrate with a compass how an aircraft can be turned on to various compass headings.
3. Choose one of the following activities:
 - a. Draw on a topographical air map a track for an imaginary flight of not less than 80 kilometres. Point out the landmarks that would show up on both sides of the track in clear visibility at an altitude of about 600 metres.
 - b. Identify on a topographical air map landmarks seen during a flight of about half an hour's duration in clear weather
4. Illustrate by means of a simple diagram how a fix can be obtained from two position lines. Describe briefly two ways in which bearings can be obtained in an aircraft.
5. Show an understanding of compass headings by completing the following two tasks:
 - a. Given the true heading and the variation and deviation, work out the compass heading on which the pilot should be flying.
 - b. Given two sets of true, magnetic and compass headings, work out the variation and deviation in each case.
6. Illustrate latitude and longitude by simple diagrams.
7. Draw on a topographical map the track between any two places not less than 100 kilometres apart and measure the exact distance. Given the aircraft's air speed as 130 km/h, work out the time of flight from overhead starting point to overhead destination in each of the following conditions:
 - a. with no wind at all
 - b. with a head wind of 30 km/h
 - c. with a tail wind of 50 km/h
8. Demonstrate your awareness of the latest developments in electronic technology such as the Global Positioning System.

For Alternatives A – land, C – water and D - GPS Navigation, plus other information see <https://members.scouts.org.uk/supportresources/586> .