



Headquarters Air Cadets Examination

Leading Cadet
32/2 Basic Navigation
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1. Use black or dark blue pen, NOT pencil.
2. Mark one answer per question with a cross.
3. If you wish to change an answer, cancel the original mark and mark another single answer.

- A selected answer.
 A cancelled answer.

Mark:

Name and Initials _____

Date of Exam _____

Date of Birth _____

Squadron/Unit _____

Wing _____

- 1 When navigating with a map, which north must you always use for reference?
- Grid north
 - Magnetic north
 - Actual north
 - True north

- 2 Setting a map is also known as:
- Mapping
 - Turning
 - Clocking
 - Orientating

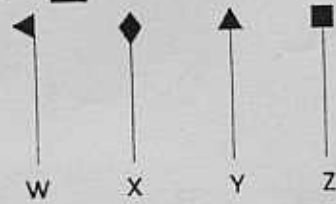
- 3 Correctly orientating your map will help you to:
- Read the numbers on contour lines more easily
 - Measure distances more accurately
 - Determine your approximate location more easily
 - Read place names more easily

- 4 Which of the following is not a method for determining north without a compass:
- Using the shadow from a stick
 - Using a watch with the sun
 - Finding wind direction
 - Finding the pole star from The Plough

- 5 Which physical property of the Earth do we use, when navigating using a compass?
- It has a gravitational field
 - It rotates clockwise
 - The surface is covered with lines of latitude and longitude
 - It has a magnetic field

- 6 Which of the following statements about the direction of magnetic north from locations in the UK, is true?
- It is the same as grid north
 - It is the same as both true and grid north
 - It is the same as true north
 - It differs from both true and grid north

- 7 Which of these symbols represents true north?
- W
 - Z
 - X
 - Y



- 8 Magnetic Variation is:
- The angular difference between true north and grid north
 - The angular difference between grid north and magnetic north
 - The angular difference between grid lines and lines of longitude
 - The angular difference between true north and magnetic north

- 9 The angular difference between magnetic north and grid north on a map is known as:
- Compass deviation angle
 - Grid deviation angle
 - Grid magnetic angle
 - Magnetic deviation angle

- 10 What information is provided at the bottom of an M726 OS map?
- Magnetic variation
 - Sheet number
 - Abbreviations
 - Grid magnetic angle

- 11 On a Silva walking compass what colour is the magnetic needle:
- Red and black
 - White and blue
 - Blue and red
 - Red and white

- 12 A compass needle may be affected by iron objects placed close by. This is called:
- Magnetic orientation
 - Magnetic deviation
 - Magnetic variation
 - Magnetic fluctuation

- 13 The final step in setting a map with a compass is to:
- Turn the map and compass together until the needle is inside the orientating arrow
 - Turn the map only until it is pointing north
 - Turn the compass only until it is pointing at north
 - Turn the map and compass together until the needle is pointing south

14 To take a bearing between 2 features on a map you would first place the compass on the map so that its longest edge runs through both features and its direction of travel arrow points in your intended direction of travel. You would then:

- a Turn the capsule on the compass so that its orienting lines are parallel to the north-south grid line
- b Turn the capsule on the compass until the needle falls into the orienting arrow
- c Turn the map and compass together until the needle falls into the orienting arrow
- d Turn the capsule on the compass to deduct the grid magnetic angle

15 The bearing of an object taken with a compass is found to be 280 degrees (M) and the map shows that Magnetic north is 10 degrees west of Grid north. What is the grid bearing?

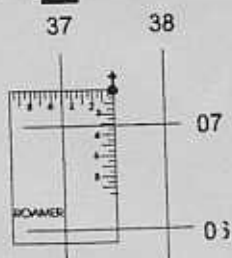
- a 260 degrees (Grid)
- b 270 degrees (Grid)
- c 290 degrees (Grid)
- d 280 degrees (Grid)

16 When walking on a bearing in good visibility, the best technique is to:

- a Follow your compass and ignore the countryside
- b Select an object 5 metres in front and walk to it
- c Select a distant feature that is along your intended direction of travel
- d Send a team member out 50 metres and walk to there

17 The 6 figure GR shown would be:

- a 072 375
- b 375 073
- c 074 385
- d 385 074



18 You are at a point where variation is 2 degrees W, and Grid Magnetic Angle is 5 degrees W. If the compass bearing of a church is 350 degrees what is its Grid bearing?

- a 343 degrees
- b 347 degrees
- c 345 degrees
- d 348 degrees

19 Pacing can be an accurate method of measuring distance if carried out over:

- a Short distances
- b To a count of 5,000
- c Medium distances
- d Long distances

20 Following linear features to guide you close to your destination is known as:

- a Using attack points
- b Handrailing
- c Aiming off
- d Contouring

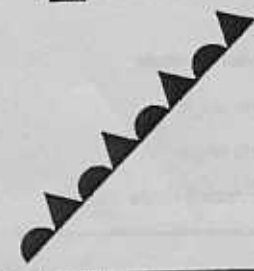
21 Which air mass is called Returning Polar Maritime?

- a Y
- b W
- c X
- d Z



22 The diagram shows:

- a Occluded front
- b Warm front
- c Cold front
- d Isobar

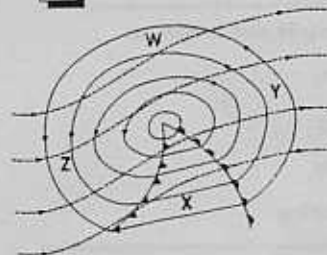


23 An anticyclone is:

- a A depression
- b An area of high pressure
- c An area between two areas of high pressure
- d An area of low pressure

24 In the diagram the dotted lines represent the upper wind and the solid lines the lower wind. If you stood at Y with your back to the lower wind and the upper wind is moving from left to right:

- a There will be no change in the weather for a while
- b You'll feel a warm wind in your face
- c The weather is likely to improve
- d The weather is likely to deteriorate



25 Cloud names may have a prefix which indicates the height of the cloud base. Which of these indicates a cloud with a base at medium level?

- a Alto
- b Strato
- c Cirro
- d Nimbo