

## **A map reading quiz from HARVEY Maps**

### **ANSWERS!**

**By Nigel Williams, HARVEY Ambassador**

1. These indicate predominantly rocky ground; it is also often steep and rarely pleasant to walk over. Harvey maps also use a symbol for scree and colour shading for altitude, useful combined with weather forecasted wind speeds and avalanche hazard reports.
2. These are auxiliary contour lines and are not at a specific height. They are there to help represent the ground as the walker will see it. OS maps keep to the strict contour interval parameters so a knoll 9m above the last contour will not be shown. Harvey maps, although they have a 15m contour interval which makes the map appear less cluttered, will add a dashed contour giving a more accurate impression of the ground from the walker's point of view.
3. Slope aspect refers to the direction a slope faces. (Solar panels work best on a south facing roof - a roof with a southerly aspect). With a compass needle we can quickly see which direction a slope faces. If lost in the hills but on a north facing slope for instance, we can immediately eliminate all areas of map indicating an east, south or west facing slope and start to unravel our likely position from there. In winter, slope aspect is one of the pieces of information that can inform us about avalanche risk.
4. The two-part question ...
  - a. This represents the High Water Mark around the coast of Britain. On a 1:25,000 map there is a blue line (like a stream) indicating the Mean High Water Mark.
  - b. No - both these scales use a thin blue line – it looks much like a stream going around the UK coast!
5. A forest ride. A ride is the historic name for a linear open space within a wood derived from the need for access.
6. They vary slightly but around 2.5°. Therefore, in the UK for about the next 20 years magnetic variation is of little significance. Magnetic variation changes at around 1° over 6 years.
7. 2.5° over 1000m could put you either side of the objective by approximately 45m, a possible span of 90m. If your pacing/timing is around 10% out (it tends to be 90% accurate) then you could be 100m + or - of the objective giving a 200m distance span which is an area of 18,000 square metres. (If you are looking for a snow hole in the middle of the night then remember to GPS its position before you leave! Or hang a lumistick from a walking pole at the door, or leave a candle on inside, or a transceiver near the door – of course that only works if someone has a transceiver to search for it!). The moral of all of this is to try to use strategies such as attack points and catching features to keep compass bearing legs to nearer 500m in order to reduce the error.
8. There are 6400 mils to a circle. Approximately 18 mils to a degree. They are of little use on

a recreational compass but for aligning long range weapons they are essential for accuracy to avoid hitting one's own troops. The military need for accuracy has dominated much of the navigation teaching in the UK for the past 80 years. We really don't need this level of accuracy for walking, biking, etc. Efforts to try to be super accurate with a compass bearing, magnetic variation etc are usually undone the moment we start walking.

9. WGS 84. If your GPS is not matching up with a known location this could be due to an incorrect setting. However, it could also be due to interference known as spoofing which shows you in completely the wrong place - in a loch instead of on a summit! Some interference simply doesn't give you a position. Whilst these are rare occurrences, military exercises often declare when there will be interference through the mountaineering websites.
10. 100 square metres. Ideally if giving someone a grid reference also add a description. For example, "at the path junction at grid reference 123456".
11. The diagonal distance across a 100m square is approximately 140m.
12. Orienteering ideally takes place in open runnable forest so anything that is not open runnable forest gets mapped. This essentially saves ink and so is cheaper to produce. It also makes the map easier to read, if it was all different shades of green representing different forest density it would be much harder to read.