



AT THE EDGE MOUNTAINEERING

"Your greatest failure is not to try"

NAVIGATION TECHNIQUES

ANSWERS

In these answers the prefix 'GR' stands for Grid Reference and does not correspond to the two-letter map prefix

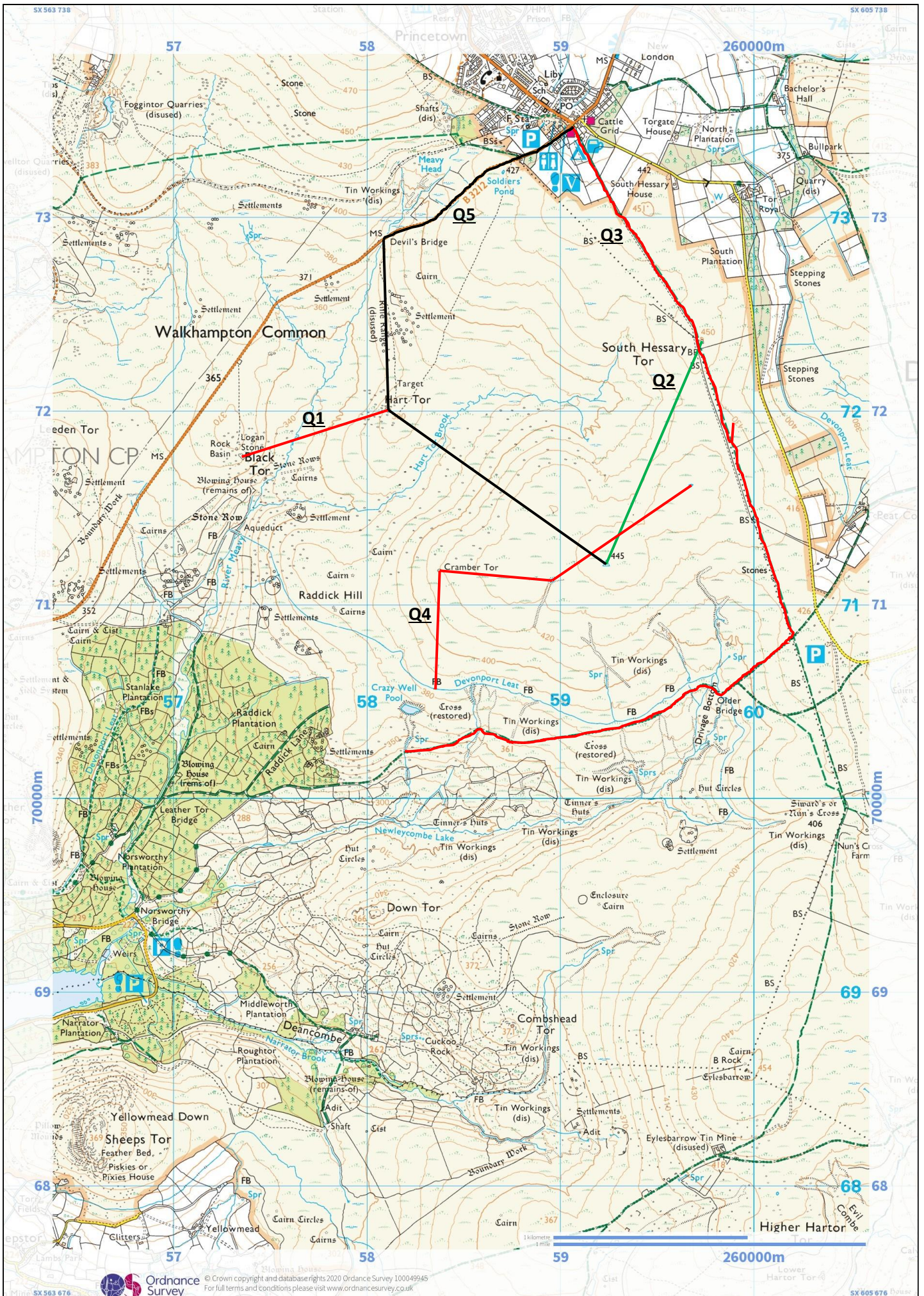
Here is the complete answer sheet for my [NAVIGATION TECHNIQUES](#) series. The maps attached show the answer locations. The actual answers are in the text below the maps.

To put these skills into practice and to learn more, take a look at my [Navigation Courses](#) I offer.

And as a congratulations for completing this series of my Online Navigation Course, somewhere in the answers is a discount code to use on ALL of my courses!

Thank you!





Q1: Using a romer or a distance card, how far is it from Hart Tor (GR 581,720) to Black Tor (GR 573, 717) to the nearest 100m?

A: 800m

Q2: Using a ruler, how far is it from South Hessary Tor (GR 597, 723) to the Trig Point (GR 592, 712) to the nearest 50m?

A: 50mm = 1.25km (1km 250m)

Q3: From where the bridleway meets the road (GR 590, 734) to where the bridleway meets the end of the embankment (GR 582, 702) follow this bridleway and measure the distance to the nearest 100m.

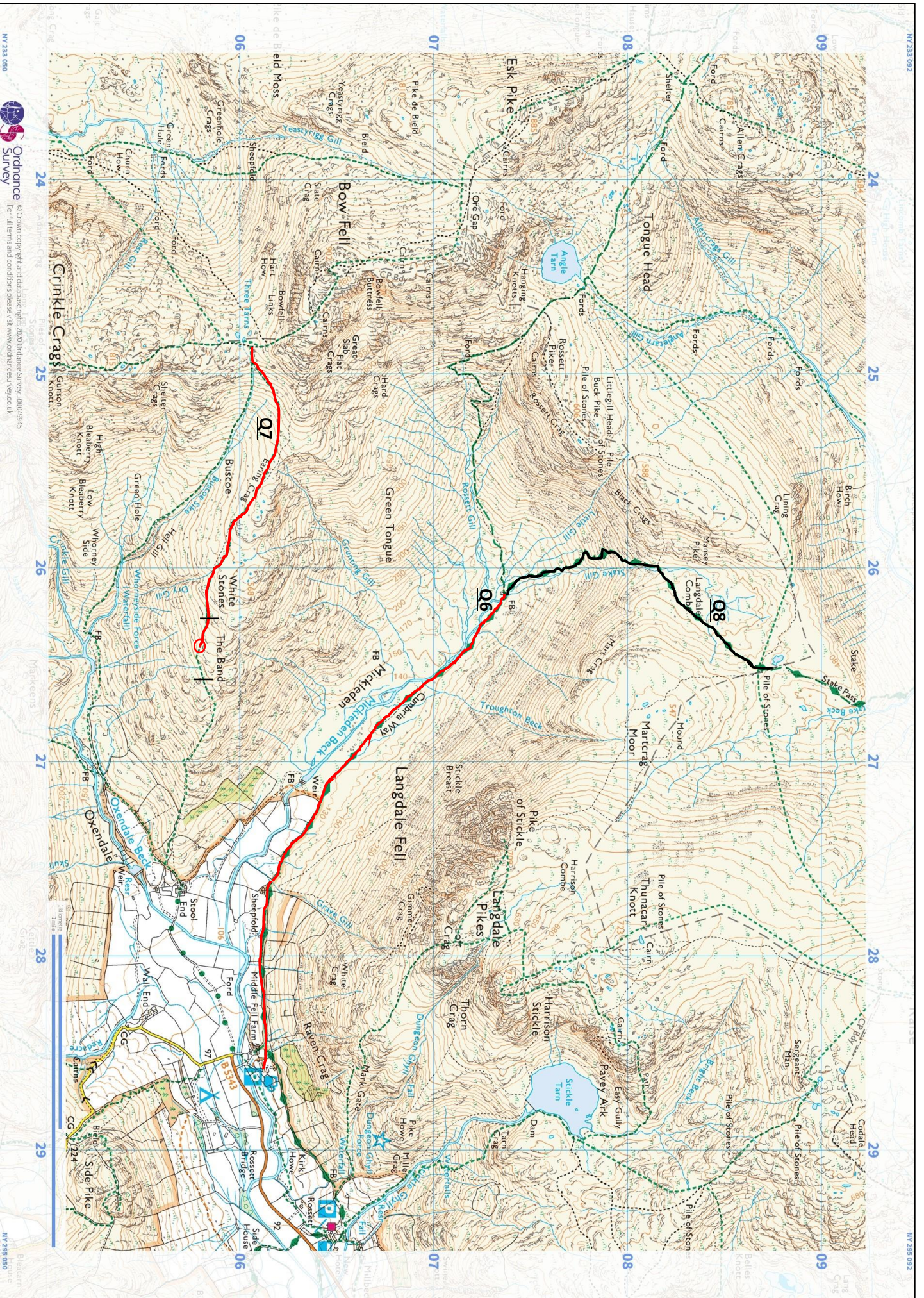
A: 5.1km

Q4: In straight lines measure the following distances to the nearest 25m and work out the total distance:

- Footbridge (GR 583, 705) to Cramber Tor (583, 711) **A: 24mm = 600m**
- Cramber Tor (GR 583, 711) to small pond (GR 589, 711) **A: 23mm = 575m**
- Small Pond (GR 589, 711) to Small Pond (GR 596, 716) **A: 35mm = 1.25km**
- TOTAL DISTANCE: **A: 2.425km**

Q5: Using any way to measure distances, measure the following distances to the nearest 25m and work out the total distance:

- Where the bridleway meets the road (GR 590, 734) to where the footpath meets the road (GR 580, 728)
A: 45mm = 1.125km
- Where the footpath meets the road (GR 580, 728) to Hart Tor (GR 581, 720) **A: 35mm = 875m**
- From Hart Tor (GR 581, 720) to the Trig Point (GR 592, 712) **A: 55mm = 1.375km**
- TOTAL DISTANCE: **A: 3.425km**



Q6: You are walking along the Cumbria way. It is a good, flat footpath and you are averaging 4kmh. You have just crossed the footbridge at GR 261, 073 heading SE. It is now 21:00 in the evening and last orders at the Old Dungeon Ghyll bar (GR 285, 061) is called at 22:00. Will you get to the bar in time?

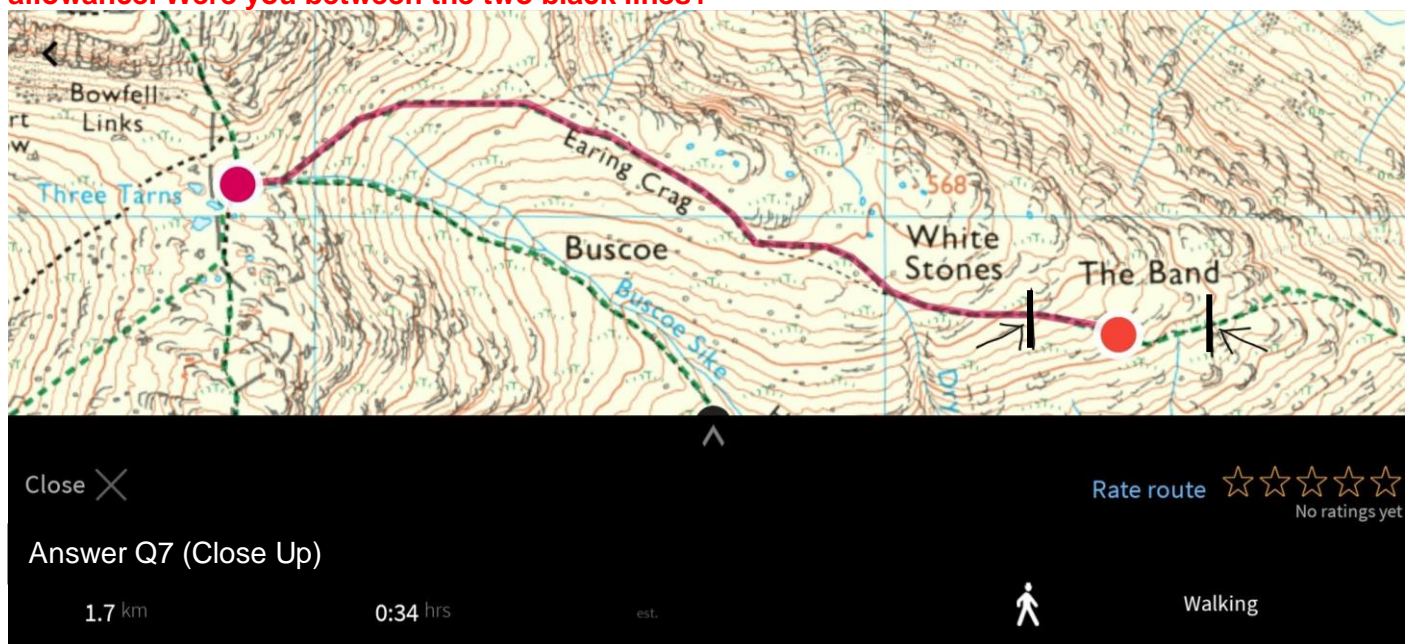
- Work out distance to the nearest 100m
- Work out time to the nearest minute

A: 2.9km = 44mins, Yes you'll get to the bar, round is on me!

Q7: You left Three Tarns (GR 248, 060) at 14:15 in the afternoon and are descending the footpath down 'The Band' to the East. You are walking at 3kmh and it is now 14:49. Roughly where are you on The Band?

- Within 10% allowance either way (Time and Distance)

A: The red dot on the right = 34mins of walking @ 3kmh = 1.7km. The two black lines are 10% allowance. Were you between the two black lines?



Q8: The distance from the footbridge (GR 261, 073) to the small Tarn (GR 264, 087) is 1.9km. Walking at 2kmh, how long will it take you to walk there?

- Consider Naismith's rule
- Within 10% allowance (Time)

A: 1.9km @ 3kmh = 38mins. We cross a contour line 34 times = extra 34 mins to our time
TOTAL Time = 1hour 12mins (72mins) +/- 7mins

Q9: No map needed for this Question: You are planning a brisk circular walk for the morning but have to be home by midday. You plan to walk at 5kmh. If you were to leave at 09:30, how far can you plan to walk?

A: 09:30 -12:00 = 2.5 hours. 2.5 hours @ 5kmh = 12.5km

Q10: No map needed for this Question: I have planned a walk which is 9.6km long with height gained of 340 metres. If I average 4kmh, how long will this walk take (assuming I take no breaks)?

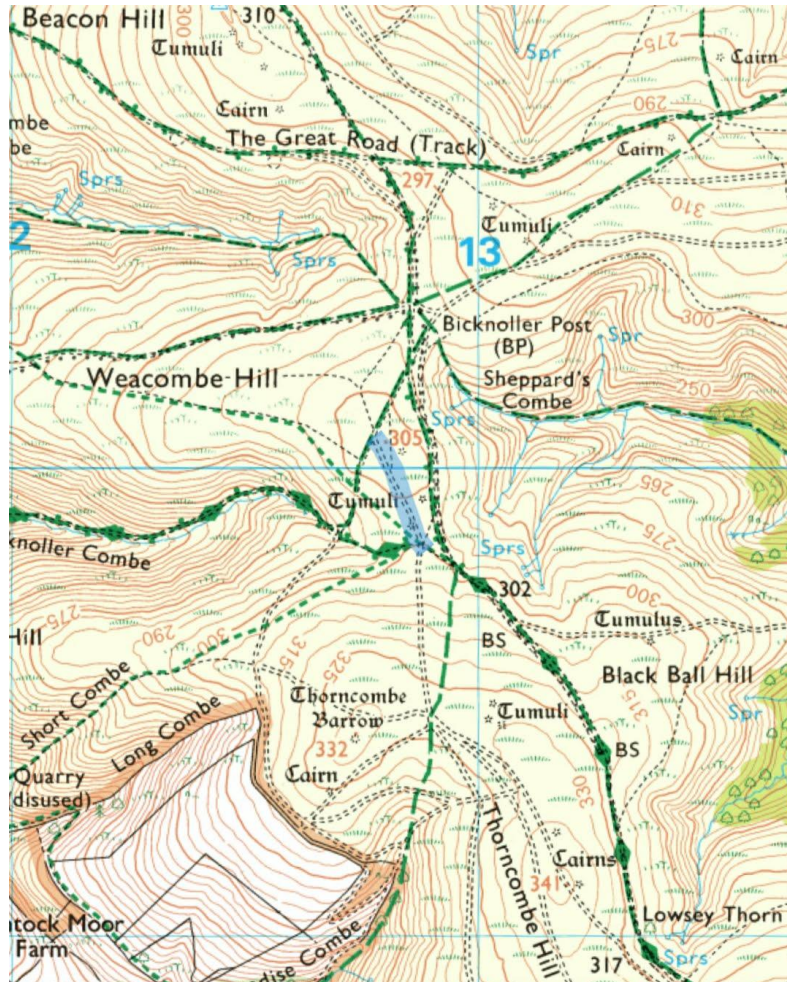
A: 9.6km @ 4kmh = 2 hrs 24mins. 340m of height gained = extra 34 mins added to time.
TOTAL Time = 2 hours 58mins

Q11: What is the bearing from the southern end of Wilmot's Pool (GR 152, 381) to the Trig point (GR 148, 381)

A: 267 degrees

Q12: I have reached the track junctions at GR 128, 398 and I am unsure which track to take. I have taken a bearing on my map down the path I want to use. The bearing is 338 degrees. Which track will I take? (Highlight on you map)

A: Highlighted in blue

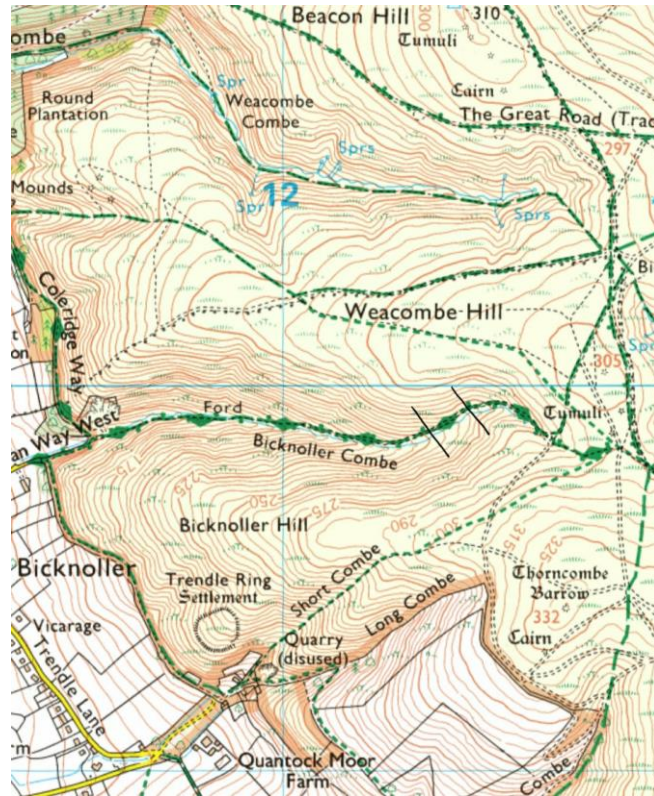


Q13: I am walking up Bicknoller Combe. I am in grid square 12, 39 and have checked the direction of the path using a magnetic bearing to see where I am on the track. My bearing is 59 degrees. Roughly where am I? (Highlight on your map)

A: Between the two black lines

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Q14: I am stood at the Tumuli at GR 131, 405. I have spotted my next checkpoint through a break in the clouds. I took a sight bearing and it was 309 degrees. What feature did I see?

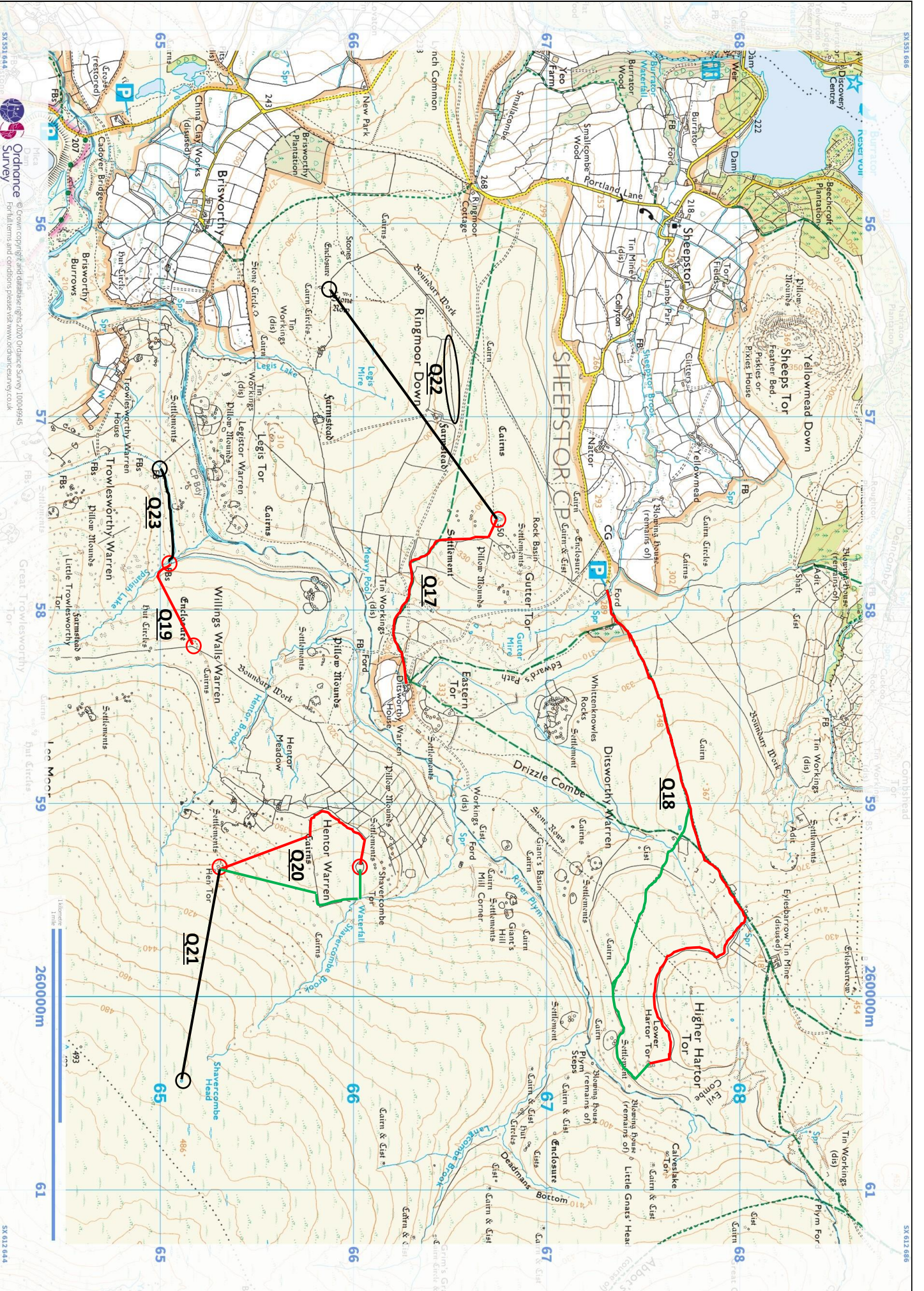
A: Trig Point

Q15: What is the bearing from the Tumulus at GR 147, 401 to Higher Knap at GR 148,395?

A: 170 degree

Q16: Check the direction of the handrail from GR 132, 379 to GR 135, 381

A: 60 degrees



Q17: From Ditsworthy Warren House (GR 584, 662) you want to head to the Trig Point on Gutter Tor (GR 575, 667). The visibility is poor. Using what you know about attack points, describe how would get to the Trig Point and how long it is going to take. You are walking at 3kmh.

A: Follow the bridleway for 850m, SW then NW until you cross a boundary. Follow the boundary North for 275m until you come to another boundary at a right angle to the one you are following. Head on a bearing of 287 degrees for 100m to arrive at the Trig Point.

**TOTAL distance and time = 1.225km = 31mins (60m of height gained)
(answers +/- 10% of the above)**

Q18: From the parking (GR 579, 673) you want to head to Lower Hartor Tor (GR 603, 675). It is night but you can manage to average 4kmh. Describe what you think is the best route to get to the Tor and why. How long will it take you?

A: Follow the bridleway NE for 1.875km to a boundary SE of the bridleway. Handrail the boundary for 1.1km to (GR 603, 676). Use this bend as an attack point. Walk on a bearing of 164 degrees for 100m.

**TOTAL distance and time = 3.1km = 57mins (110m of height gained)
(answers +/- 10% of the above)**

A: Follow the bridleway NE for 1.250km to a path heading E/SE. Follow this track for roughly 1km on a bearing of 114 degrees until you reach a boundary. Handrail this boundary E/NE for 475m until in line with a small enclosure SW of the boundary. From This attack point, walk on a bearing of 314 degrees for 150m.

**TOTAL distance and time = 2.9km = 56 mins (120m height gained)
(answers +/- 10% of the above)**

Q19: From the enclosure (GR 581, 651), what technique or techniques would you use to find the footbridge (GR 577, 650)?

A: Aim off up the stream. Use the stream as a catching feature (rough navigation). Handrail the stream to find the footbridge.

Q20: From Hen Tor (GR 593, 653), describe how you would navigate to the Settlement (GR 593, 660)

A: Use a rough bearing to get to the boundary in the North (rough navigation). Handrail the boundary E then N until you meet the stream and waterfall. Use the stream and waterfall as an attack point. Walk on a bearing of 270 degrees for 150m

A: Use a rough bearing to get to the boundary in the North (rough navigation). Handrail the boundary W then NW/NE until you reach a prominent right-angle corner. Use this as an attack point. Walk on a bearing of 102 degrees for 150m.

Q21: From Hen Tor (GR 593, 653), how far and how long will it take you, walking at 3kmh, to get to the small pond (GR 604,651) and on what bearing?

A: 1.125km = 29 minutes (70m of height gained)

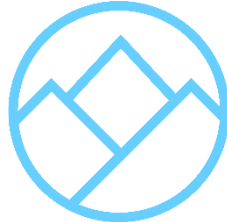
Q22: From where the Stone Row meets the Boundary (GR 563, 659), you set a bearing to head to the Trig Point (GR 575, 667). The visibility is poor, and you think you may have wandered off your bearing. You come across a boundary and check the direction it is running in. It is running along a bearing of 87 degrees. Which boundary are you on? (Highlight on your map)

A: Circled in BLACK on the above map

Q23: You are walking at 3kmh, following the Leat in grid square 57, 64 and 57,65 You are heading for the footbridge (GR 577, 650) and want to know how long it is going to take you to get there. You are stood by another footbridge, but which one? (*highlight footbridge on your map*)

- You passed a footbridge 2 minutes ago
- The aspect of slope from your position is 322 degrees

A: Footbridge circled on the map above. From your location it is 500m to the next footbridge. It will take 10 minutes



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This concludes the second series in my online navigation courses. I hope that you have found it helpful and inspired to learn more!

To put these skills into practice, take a look at my [Navigation Courses](#) I offer.

All successful bookings will also receive 10% off [Harvey Maps](#) products from their website

Let me know how you got on with this course and if you have any questions:

info@attheedgemountaineering.co.uk

See you At The Edge!