

Notes on Problems: BTOC 2018 Elite course

Timed Control 1: Answer F. The choice could be narrowed down quickly to E or F. The E kite was too far east and outside the mouth of the re-entrant.

Timed control 2: Answer B. Only A, B and C were on or near the front spur. The A kite was too high up (above the cliff), and the C kite was at the spur foot.

1. Answer B. The kites were on top of the two west-most spurs. Although a bit tricky to see due to very recent leaf growth, their position relative to each other (and to the front of the pond) could be identified moving from side to side on the road and using parallax.

(The pond, by the way, was built by Crathes estate for producing ice in winter, which was then cut into blocks and stored in an ice house, in bygone days before modern refrigeration).

2. Answer Z. The A and C kites were on the corners of the two nearer fenced enclosures. The middle B kite was roughly midway between those enclosures, and about 8 metres in front of the middle enclosure. The fact that only the upper part of the middle enclosure fencing was visible, may have given you a hint that the flag was in front of it (in fact the flag would not have been visible at all, had it been put right beside the middle enclosure at the circle centre). The long distance to the kites, the limited scope to move sideways along the path, and the recent leaf growth, all conspired to make this a particularly hard problem.
3. Answer Z. (Voided due to purple dot printed over boulder on map). The solitary kite was placed by some unmapped rock (under the 1m height mapping threshold). The kite was much too close to the clearly visible knoll. The mapped boulder was out of sight, over the spur.
4. Answer D. Once you worked out which trees were big enough to have been individually mapped, then this became a lot easier! The D kite at the circle centre lay midway between large trees to the NE and SW of it. It was close to an unmapped small tree which perhaps confused some people.
5. Answer Z. The B kite could be ruled out as between the wrong pair of trees. It was tricky to determine whether the A kite was in line with the trees, or in front of them – in fact it was about 5 metres in front. There was limited viewing scope to assess parallax.
6. Answer Z. The small crag (and the boulder east of it) were largely hidden by rhododendrons. You had to judge distances to realise that the two kites were further west - on the end of the very big western crag, and on an unmapped rock. This was clearer if viewed from the small path below the very big crag.
7. Answer A. The key thing here was to identify the mapped boulder, and the various mapped crags. Kites C and D could then quickly be ruled out. Kite B was too far back, which you could tell by moving west along the road.
8. Answer Z. A straightforward parallel feature problem. The kite was located in the eastern of the two gaps, as you could readily tell by pacing distances from features south of the road.
9. Answer A. (Voided as the B kite was blown down during the event.) The two kites appeared very close together from the viewing point. But the B kite was about 7 metres behind the A kite, higher up on the spur, and in the green. This was easier to see back up the road, east of the viewing point.
10. Answer E. The ditches and marshes could not be seen, so bearings and estimated distances had to be used. Kite D was too close. A bearing taken from the boulder by the path indicated kite E. Looking NE

along the line of the small path, from its junction with the road, would have helped establish that kite E was indeed on the line of the ditch.

11. Answer Z. This was made trickier by the distance away of the kites. Kite A could be ruled out as on top of the cliff. Kite B was high up the re-entrant, so was not "lower part". Kite C at the crag foot could have been confused with being in the re-entrant, but was higher vertically and parallax gave clues.
12. Answer B. The A kite was too high up the re-entrant, alongside the rhodo bush. The C kite was too low down, alongside the small crag just to the west of it. The kites were spaced too close together to allow a Z answer.
13. Answer B. (Voided due to purple dot printed over boulder on map). This was an area of rather broken ground. The A kite was on an unmapped rootstock NW of the knoll. The D kite was likewise on an unmapped lump on the far side of the ditch. The boulder by the C kite may have looked a bit like a knoll from the viewpoint, as it had a rootstock beside it, but was significantly too close to be the true knoll.
14. Answer Z. You would not have seen a kite at the ditch end, as it wasn't quite visible from the viewing point, being hidden behind the tip of the green forest. The B kite was nearest but was about 8 metres from the ditch end.
15. Answer Z. There's some unmapped rock here, smaller than mapping thresholds. If you identified the various mapped crags and rocks clearly, this should have been fairly straightforward. The C kite was the most plausible candidate, but was south of the control circle crag, and the other kites could be readily eliminated.
16. Answer A. Visibility was fairly good here in the conifers. The saddle is fairly shallow, but could be picked out relative to the slightly higher ground to the east and west of it, and the head of the re-entrant in front of it. It was also SW of the two knolls.
17. Answer B. (Voided). The A kite could not be correct, as it was located due east of the nose of the elongated spur.
18. Answer C. The key was to understand which parts of the northern line of crag were above and below mappable height (1m) and therefore where the gap was. This problem fooled hardly anyone!
19. Answer A. The description was "Middle crag, SW foot". All three kites could be described as being at the crag foot, as they each had 1m or more of crag above them. The A kite was at the SW-most part of the crag and was the one to choose.
20. Answer Z. The description again was important: "SW crag, E foot". The kite was placed to the eastern side of the crag end, and therefore could not have been at the crag foot, as this would have required at least 1m of crag height above the flag.

Notes on Problems: BTOC 2018 Standard course

21. Answer A. The B kite was clearly situated to the west side of the line of small trees, so could be ruled out. Then it was a case of checking that the A kite was midway between the correct pair of small trees, which could be confirmed by moving further along the road to get a better view.
22. Answer D. Once you worked out which trees were big enough to have been individually mapped, then this became a lot easier! Looking at the trees from near the viewing point for problem number 1 may have helped you, as you could see the four prominent trees in a line on bearing 290° , and then pick out the correct kite between the furthest pair.
23. Answer Z. The boulder and the adjacent small crag were largely hidden by rhododendrons. You had to judge distances to realise that the two kites were much too far west - on the end of the very big western crag, and on an unmapped rock. This was clearer if viewed from the small path below the very big crag.
24. Answer C. The key thing here was to identify the various mapped crags. Kites A and B could quickly be ruled out as not being placed at a crag foot. Kite D was too far back and on the wrong crag, which you could tell by moving west along the road.
25. Answer D. This was a tricky problem as the ditches and marshes could not be seen, so bearings and estimated distances had to be used. Kites A, B and C could be ruled out as being too far away, on the far side of the small path. Bearings taken from the boulder by the path, and from the path/road junction, both indicated kite D.
26. Answer A. The kite could be seen located on top of a knoll, but you had to check whether it was indeed the mapped knoll, or some other unmapped rise in the ground. It was best to take a pair of bearings from identifiable points on the road, left and right of the viewing point, to try to get a good triangulation.
27. Answer B. A first step was to identify the mapped boulder on the ground (n.b. only rock over 1 metre high is mapped). This left a choice between A and B kites, and the A kite was too close to the road and beside a low rock that was unmapped.
28. Answer C. Of the three kites on the spur, the A kite could be ruled out as being too far east, near the head of the re-entrant in front. The B kite was also too far east, e.g. relative to the boulder field. Bearings taken from known points on the road would help to confirm kite C.
29. Answer A. Both kites were placed on the ruined wall. The circle was centred east of the nose of the elongated knoll. The position of the A kite matched this well, whilst the B kite was too far south.
30. Answer B. After identifying the three mapped knolls, you could rule out kite A as being by the wrong knoll (and too close to the road). The C kite was not at the north side of the furthest knoll, but the B kite was.
31. Answer B. The circle was centred on the high crag, behind and above the smaller front crags which were nearer the road. This should have led you to rule out the four kites lower down, and simply review the circle centre position to decide between B or Z.
32. Answer Z. The precise control description was important: "SW crag, E foot"; the descriptor "foot" is all important. The kite was placed to the eastern side of the crag end, and therefore could not have been at the crag foot, as this would have required at least 1m of crag height immediately above it.