

Navigation Workshop: Take-home Problem Set (Optional)

Use the Baring map for problems 1-5.

You park your car where a forest service road crosses Bitter Creek, and travel cross-country to the westernmost of the Tom Dick and Harry Lakes.

1. What is the elevation where you park your car?
2. What is the elevation gain from your car to the lake?

Seeking a campsite with a view, you continue on to the second, third, and fourth lakes. The second and third lakes are disappointing. At the fourth lake you find an open area with a view to the north and east.

3. What is the minimum distance travelled from the first lake to the fourth lake?
4. From your campsite on the south shore of the fourth lake, you see peaks at 58° and 89° . What are these two summits?
5. What are the UTM coordinates of these two summits?

Use the Index map for problems 6-11.

You park your car at the Lake Isabel trailhead and hike to the lake.

6. What is the elevation at the trailhead?
7. How many miles do you hike to reach Lake Isabel?
8. What is your elevation gain?

While camped at the south outlet of Lake Isabel, you decide to scramble to the top of Peak 4450.

9. What is the easiest route to the summit?
10. What UTM coordinates should you enter into your GPS so that you can keep track of the direction and distance to the summit?

Clouds roll in and you decide to return to Lake Isabel. You follow a ridgeline back down and arrive at UTM coordinates of NAD27, Zone 10, E 606300, N 5302700.

11. Did you return successfully to your camp? If not, what went wrong, and what is the compass bearing and distance back to camp?

Bonus Problem (Baring Map)

Your party is doing some exploratory scrambling near Merchant Peak, when your trip leader missteps and injures an ankle badly. After tending to her injury, it is clear that she will be unable to walk out. You are in the backcountry with no cell phone service, but fortunately one member of your party is an amateur radio operator, has a handheld radio in his pack, and finds that he is able to make contact with a buddy who can call for help. You have no GPS, but you have your compass and the Baring map. You take bearings on Merchant Peak (119°), Gunn Peak (28°), and Baring Mtn(159°).

12. Determine your elevation and UTM coordinates, to provide to Search and Rescue.

***** ANSWERS *****

1. 2320 feet
2. 1027 feet
3. about 4000 feet, assuming that you don't circle each lake
4. 58° is Iron Mountain, 89° is Conglomerate Point
5. NAD27, Zone 10, E 617430, N 5301540 (Iron)
NAD27, Zone 10, E 619200, N 5300240 (Conglomerate)
6. 1130 feet
7. 2.75 miles
8. 1717 feet
9. Follow the ridgeline uphill almost due east from the lake outlet. It will begin to curve to the southeast. Reach a small saddle and continue southwest to the summit.
10. NAD27, Zone 10, E 605560, N 5301660
11. No, you followed the wrong ridgeline down to the lake. You need to travel at 250° for one mile to return to camp.
12. Elevation 5600 feet
NAD27, Zone 10, E 615900, N 5296100