You are hiking a named but trail less peak in the Evans Notch area. You want to confirm that you are on the desired peak. You have a map and a compass. From where you are you can make out the summits of Eastman Mtn. and East Royce. In reality you may not be able to see those two peaks because of your elevation and trees. Humor me.

You get out your map and compass and you sight a magnetic bearing to Eastman and come up with 257°M and to East Royce you get 342°M

Which peak are you on?

Answer

Now that you have magnetic bearings you need to convert to true bearings. Remember that when we measure a bearing on a map we are measuring bearings to true north. The “vertical” lines on the map are aligned to true north. Once we measure a bearing on the map we would then need to add the declination to come up with a magnetic bearing to use the compass in the field to navigate to the desired location.

In this case we are starting with a magnetic bearing and need to subtract the declination to come up with a true north bearing.

By subtracting 15° from the 257°M to Eastman you come up with 242°T

Set your compass to 242° Place the base plate of your compass with the direction of travel arrow towards Eastman and the far edge of your base plate on the peak of Eastman. Using Eastman as a “pivot point” rotate your entire compass until the orienteering lines in the bezel of the compass align to the north lines on the map. Now draw a line along the edge of the base plate of your compass as far as you can.

Repeat the process using 342° - 15° = 327° using East Royce as the “pivot point”. Where the two lines intersect is where you are. You should be at the summit of Palmer Mtn 44°15.3’N 70°57.6’W

See maps for answers.