

10th Mountain Division Descendants K-12 Education Project

Grade Level: 7th

Topographical Map Activity

Introduction: The 10th Mtn. Div. Desc. K-12 Education Project was developed to help our younger members become “engaged” in the story of WWII as experienced by the 10th Mountain Division. Students will have the opportunity to complete an activity at each grade level which will help them better understand the significance of WWII and, in particular, the contributions and sacrifices made by the 10th Mtn. Div. Upon completion of each activity the student will receive an achievement certificate, a patch or medal and recognition in the Blizzard.

The story of the 10th Mtn. Div. is one that must be remembered. It is the hope that by completing these activities, their legacy will continue.

SEMPRE AVANTI!

Background: The 10th Mountain Division was created, in part, to train soldiers who would be able to fight in year-round mountain conditions. Whether in the winter or summer they needed to be able to adapt to whatever conditions they faced in order to be able to defeat the enemy.

They trained at Camp Hale which was the highest training camp in the US at that time. Camp Hale was 9,200 ft. in elevation and some of the surrounding peaks reached over 14,000 ft. In 1943 the 87th Mountain Infantry Regiment was sent to the Aleutian Islands near the coast of Alaska as part of Task Force 9 with the goal of defeating the Japanese who were on the island. In order to do so the soldiers would need to climb the surrounding volcanoes and ridges which reached close to 1700 ft. Then, in Italy the 10th Mtn. Div. would fight the Germans in the Apennine mountains which would reach to over 5,000 ft. Needless to say, the 10th Mountain Division, certainly was given the right name!

This activity is going to introduce you to the topic of topographical maps. A topographical map is a type of map which gives you an idea of the shape of Earth’s surface by using contour lines. There are many things that you can learn from using a topographical map but this activity is mainly focused on using topographical maps to gain a better understanding of the mountains and terrain the 10th Mtn. Division faced in WWII.

Objectives: 1) to introduce the topic of topographical maps. 2) to understand how topographical maps differ than other maps. 3) to better understand the mountains and terrain faced by the WWII 10th Mtn. Div. by use of topographical maps.

Directions: This activity is based on Topographical Maps. Read the lesson below and answer all of the questions including the Final Comments section.

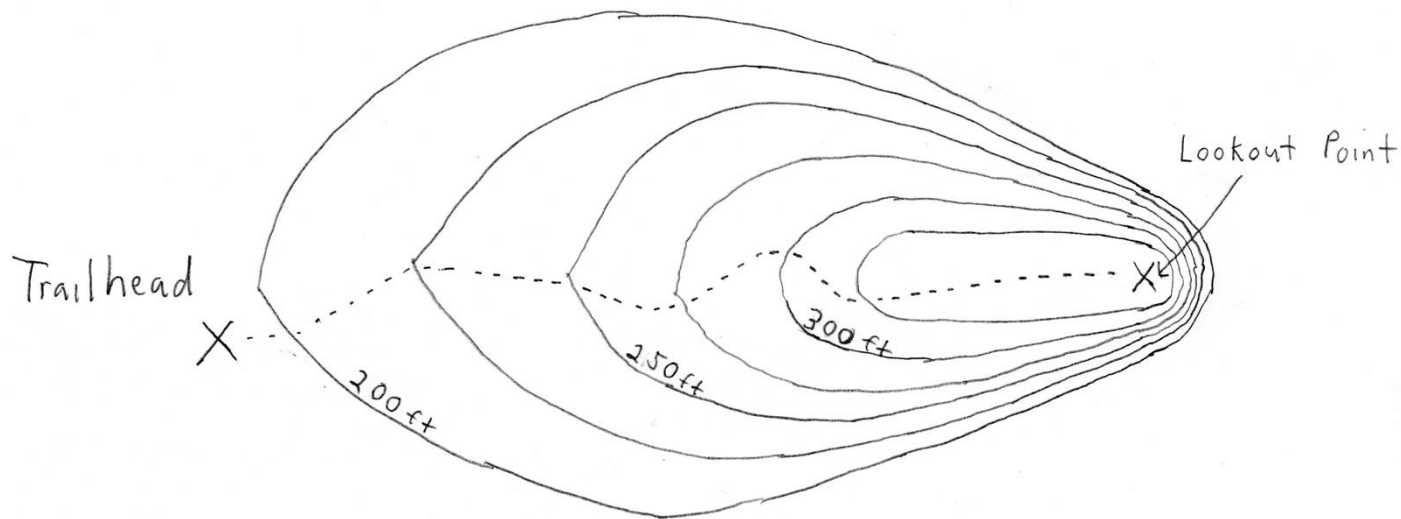
TOPOGRAPHICAL MAPS

Let’s say your family decides to go to the ocean for a little vacation. You are staying in a little cottage just yards from the beach and there is a hill nearby. The family decides to climb the hill to

get some exercise so the next morning everyone packs a few snacks, water, sun block, sunglasses and a hat and off you go. When you get to the trailhead you read the sign and it says, "You will be hiking to Lookout Point (Elevation 325 ft.) which will give you beautiful views of the ocean and nearby mountains. Warning: There is a cliff just beyond Lookout Point so do not go beyond the fence as it is meant for your safety. Enjoy your hike but please remember to take your trash!"

Now remember, a topographical map uses contour lines to give you a picture of the earth's surface and, in this case, a picture of your hike. The elevation change between each contour line is the same for a particular map. But all topographical maps do not necessarily have the same elevation change between contour lines. Some maps have an elevation change of 50 ft between contour lines, other topographical maps have an elevation change of 200 ft. between contour lines. It is important to check the information on the map to know the change in elevation between contour lines for the map you are using.

A topographical map of your hike to Lookout Point might look like this:



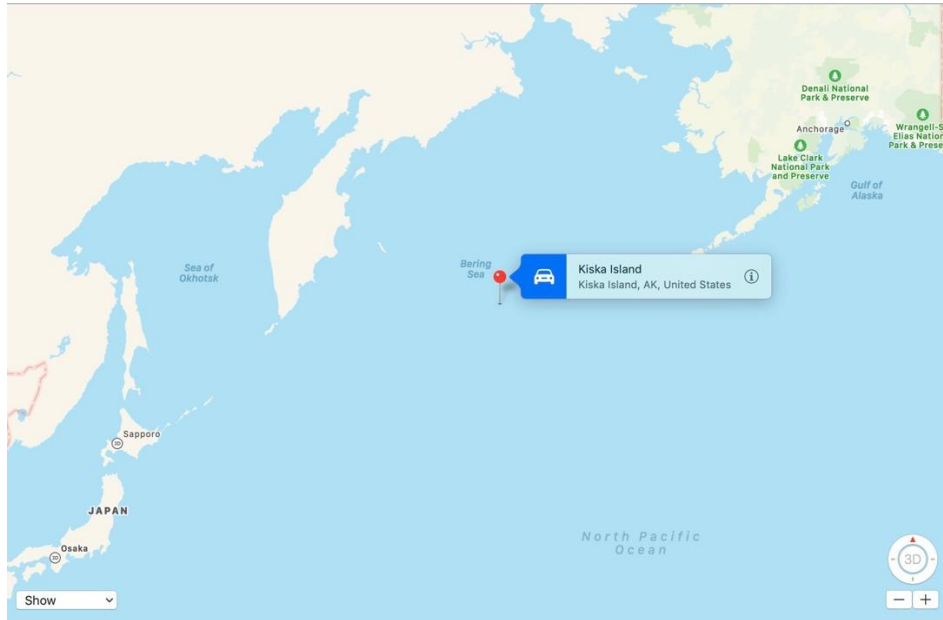
Let's first study the map!

When you look at the contour lines you will notice that not each line is marked. In fact, only three lines are marked (200 ft, 250 ft and 300 ft) and there are three unmarked lines. You know that the elevation change between each line is exactly the same so what do you think the elevation change is for each line? That's right, the elevation change between each contour line is 25 ft.

You can also see that the trail up to Lookout Point is a gradual slope as the distance between contour lines is big. But notice the contour lines on the other side of Lookout Point. Remember the sign at the beginning of the trail? It said there is a cliff so be careful! The space between these contour lines is very small which is another way of letting you know that it is very steep on this side of the hill. So now that you know a little about topographical maps you will be using your knowledge

to complete the following questions using topographical maps of places that the 10th Mtn. Div. soldiers were during WWII.

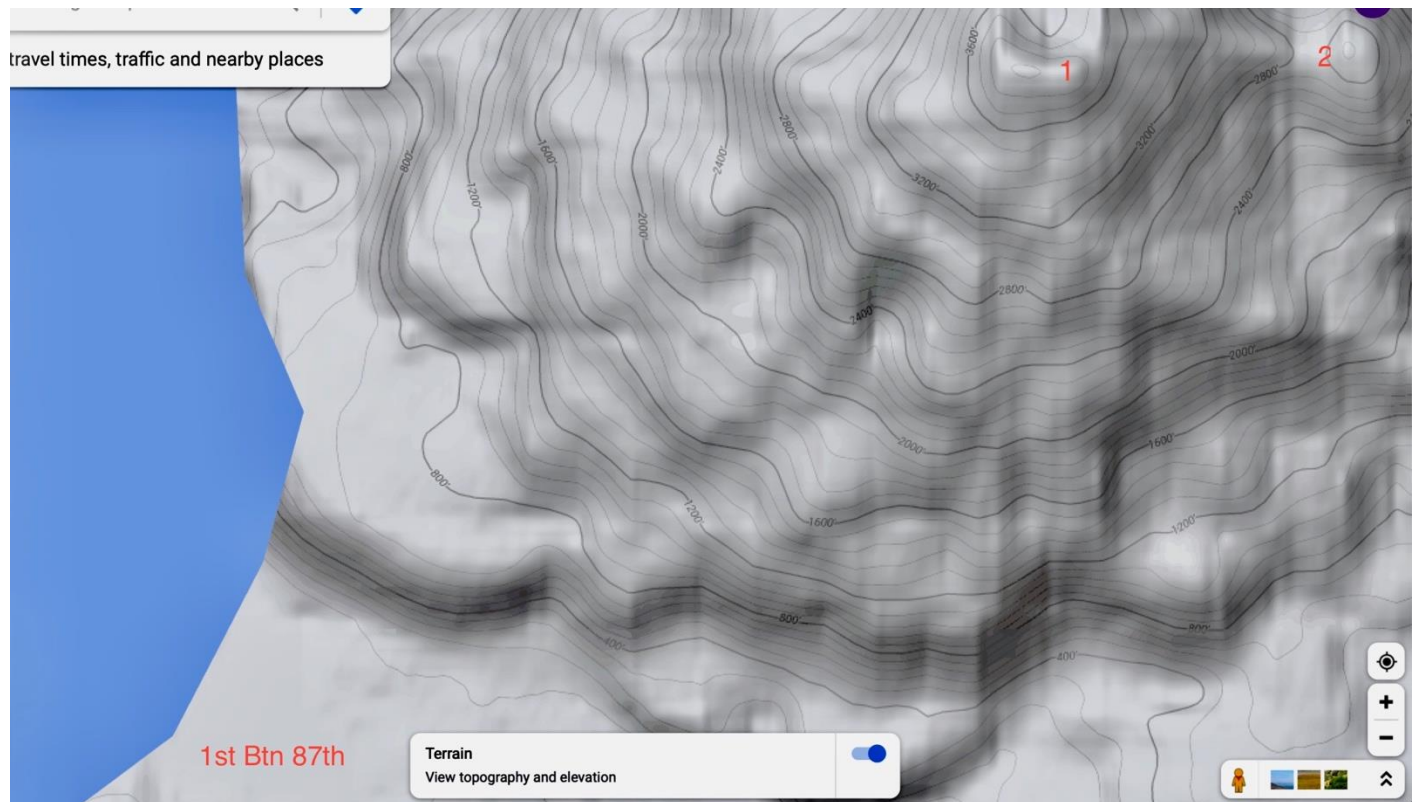
A. Below are four maps; one is a regular map, another a satellite and two topographical maps.



This first map gives you an idea of where Kiska island is located. You can see that it is a part of the Aleutian chain of islands off the coast of Alaska. Notice how close it is to Japan and in 1943 Kiska and nearby Adak island were held by the Japanese so it was important that the United States take back these islands.



This second map of Kiska shows where the three battalions of the 87th Mountain Infantry Regiment landed on the island. They were part of roughly 35,000 U.S. and Canadian troops, known as Task Force 9, who waded ashore on August 15, 1943 to take back the island.



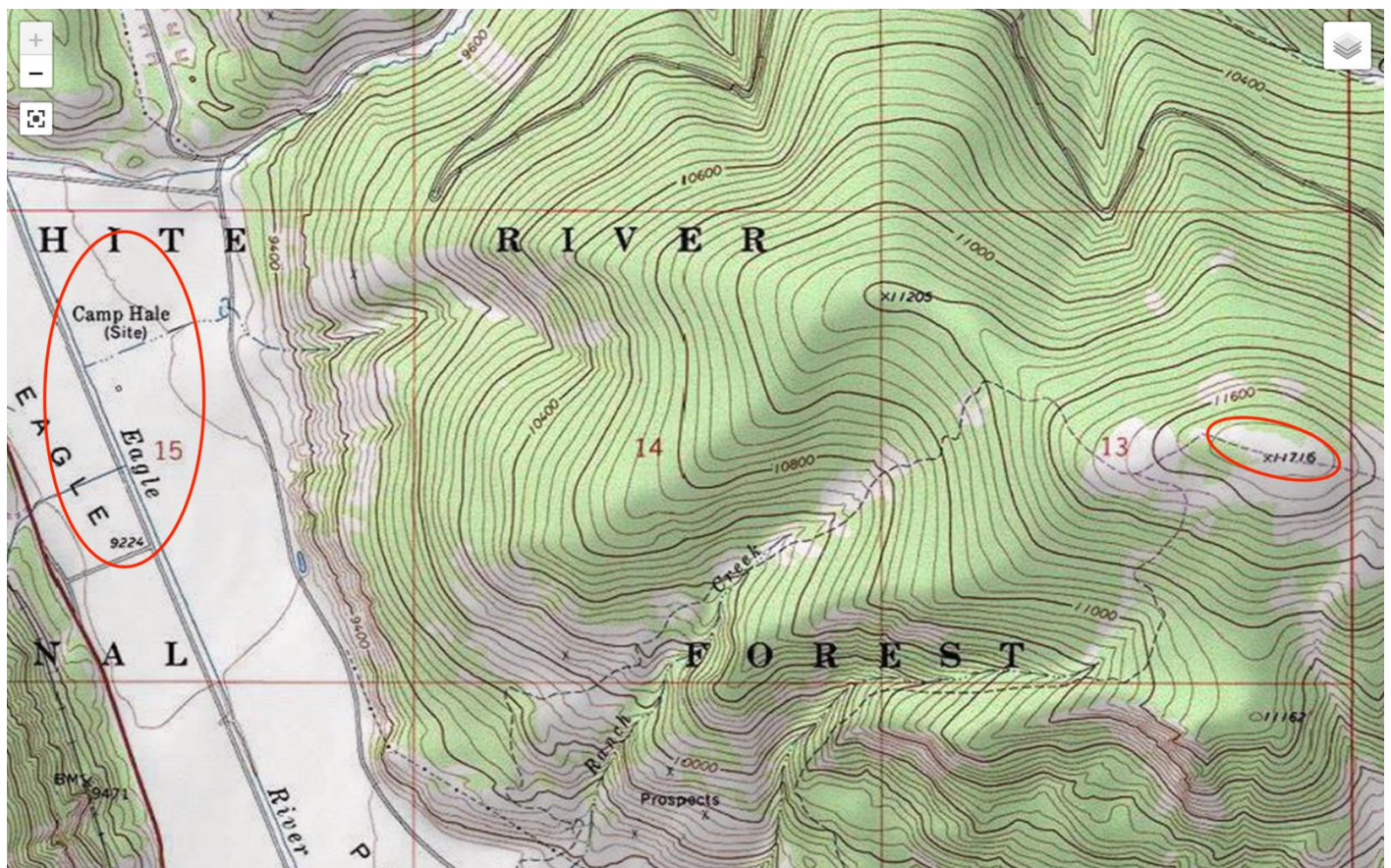
This is a topographical map of the area where the 1st battalion of the 87th landed. Notice that the area in front of them was not very steep. Notice how the contour of the lines looks like the shape of a circle. Well, that is because this is a volcano and the two highest points are at the top of the volcano. The elevation change between lines in this map is 80 ft. Now for some questions.

1. The contour lines going towards the top of the volcano are close together because:
 - a. _____ The climb is getting steeper.
 - b. _____ The climb is getting more level or flatter.
2. Approximately how high is Point #1? _____ (Remember, there is approximately 80 ft between lines!)
3. Approximately how high is Point #2? _____



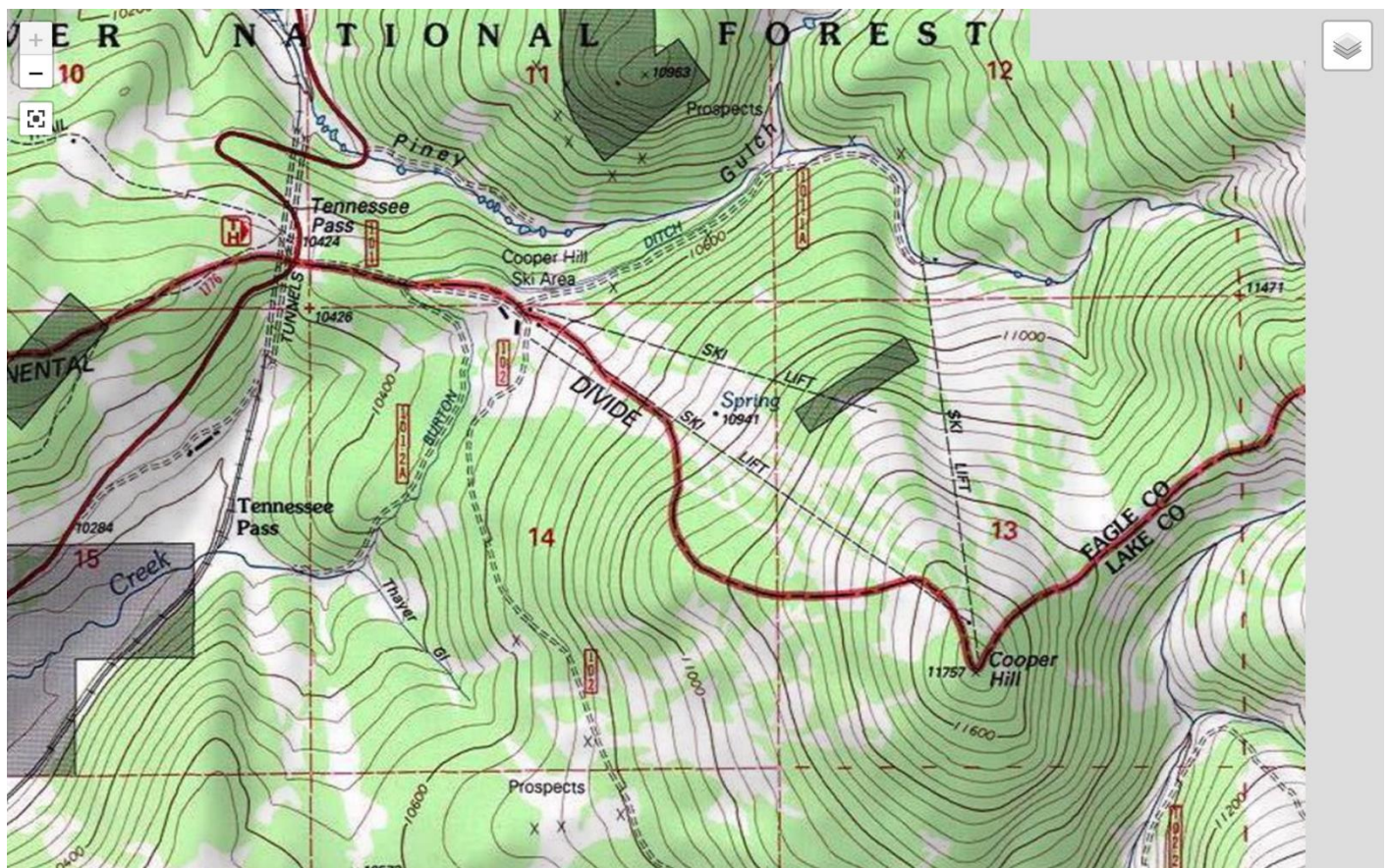
This is another topographical map of Kiska where the 2nd and 3rd battalions of the 87th landed. Again, the change in elevation between lines is 80 ft.

4. How many peaks (high points) do you see in this map? _____
5. What is the approximate elevation (height) of the highest peak? _____



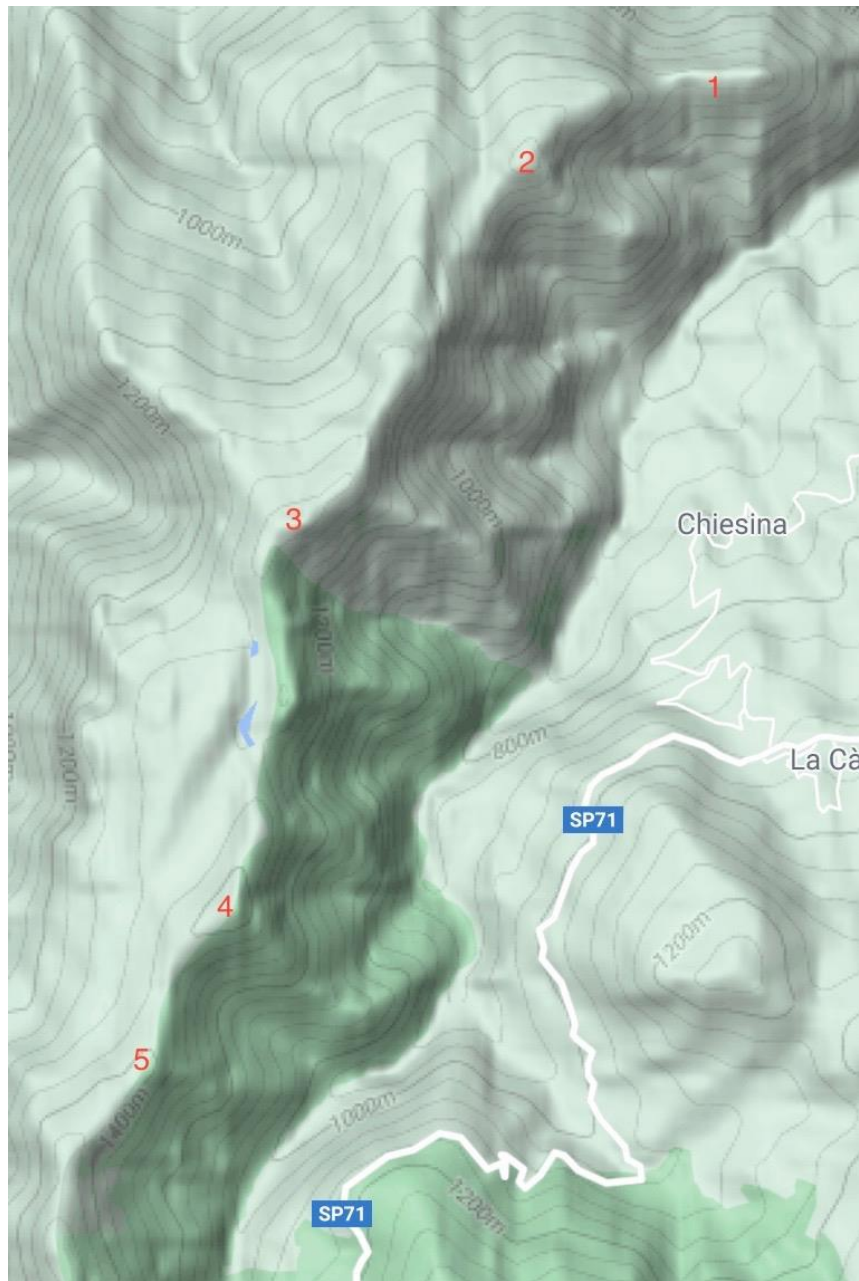
This is a topographical map of the Camp Hale area in Colorado where the 10th Mtn. Div. soldiers trained in 1943-1944.

6. What is the elevation of Camp Hale? _____
7. What is the elevation of the peak circled in red? _____



The Cooper Hill Ski Area was near Camp Hale and this is where the soldiers learned to ski. The elevation change in this topographical map is 40 ft. between contour lines.

8. What is the elevation of Tennessee Pass? _____
9. What is the approximate elevation of the Cooper Hill Ski Area? _____
10. What is the elevation at the top of the ski lift at Cooper Hill? _____



This is a topographical map of Riva Ridge in Italy. The 86th Regiment climbed this ridge during the night of February 18, 1945 and surprised the Germans who were just waking up and having breakfast. There were five routes used to climb Riva Ridge. They are numbered one through five.

- 1 – Pizzo di Campiano
- 2 – Mt. Cappel Buso
- 3 – Mt. Serrasiccia
- 4 – Mt. Mancinello
- 5 – Le Piaggige

This is an Italian topographical map so the contour lines are marked in meters, not in feet. In order to convert meters to feet you must multiply meters by 3.28. This will give you the approximate measurement in feet. For example, 10 meters = 32.8 feet. (10 X 3.28 = 32.8)

Below are the elevations of each of the five climbing routes listed in meters. Convert them to feet.

11. Pizzo di Campiano (920 meters) = _____ ft.

12. Mt. Cappel Buso (1120 meters) = _____ ft.

13. Mt. Serrasiccia (1360 meters) = _____ ft.

14. Mt. Mancinello (1400 meters) = _____ ft.

15. Le Piaggie (1420 meters) = _____ ft.



This is a photo of Riva Ridge taken from Mt. Belvedere. The five climbing routes are numbered in red, 1-5.



This is a topographical map of Mt. Belvedere (1) The Germans held the Mt. Belvedere ridgeline and was part of the Gothic Line. On the night of February 19, 1945, the day after the assault of Riva Ridge, the 10th Mtn. Div. began their attack starting from the village of Querciola (2). By the next morning the Germans had been defeated!

Now for some final questions.

16. Contour lines are listed in meters. What is the elevation change between each contour line? ____
A. 10 meters B. 20 meters C. 30 meters D 40 meters
17. What is the approximate elevation of Mt. Belvedere? ____
A. 1090 meters B. 1100 meters C. 1110 meters D. 1120 meters
18. The number 2 in red which indicates the village of Querciola is on what elevation line? ____
A. 840 meters B. 940 meters C. 990 meters D. 1000 meters.



This is a photo of the Mt. Belvedere Ridgeline taken from the village of Lizzano in Belvedere.

FINAL COMMENTS

We hope that by completing this activity you have learned something new about Topographical maps and the mountains and terrain experienced by the soldiers of the 10th Mtn. Div. during WWII. Please write some of your thoughts and comments in completing this activity.

We would like to include a photo of all students completing this activity in the next edition of the 10th Mountain Division Association digital newsletter, the Blizzard. Please include a photo of yourself if you would like it to be included in the Blizzard.

Upon completion, send your document and photo to:

Val Rios at: vrrios913@aol.com

Include the following information with your submission:

Name: _____

Address: _____

City: _____

State: _____

Zip: _____

Home or Cell Phone: _____

Email Address: _____

Are you a descendant of a 10th Mountain Division soldier? If yes, what was his name and what unit was he in? _____