

## WORKSHEET – MOUNTAINEERING PREPARATION

The purpose of this worksheet is to provide you with the opportunity to review basic map and compass skills and information prior to participating in the outing. You will require the following:

- A. A map of the Three Fingered Jack region. An 11" x 17" color copy is available at the Campus Copy desk in the lower level of the EMU
- B. An orienteering compass (or a protractor). A magnifying glass may help estimate elevations and find points. For a detailed view of the map, review the pdf posted to the climbing page on the OPP website. The map is password protected ( wild1 ).

Any worksheet that does not meet the standards for a "C" or better must be re-done and submitted in acceptable form *prior to the outing*. A "C" grade requires:

- a) Complete answers to all questions, and
- b) Correct answers to not less than 85% of the questions.
- c) Bearings must be no more than 2° off.
- d) Distances must be within one-tenth of a mile.
- e) Elevations must be exact! If a feature is between contour lines, split the difference.

1. What is the contour interval of the map you are using? \_\_\_\_\_ ft.

2. What is the local declination? \_\_\_\_\_°

3. What is the elevation of the following points?

Long Lake: ..... feet

Square Lake: ..... feet

Booth Lake: ..... feet

Martin Lake: ..... feet

Summit Lake: ..... feet

4. Provide the bearing and distance, as requested below:

*Bearing*      *Linear Distance*

From Pk 5274 (E of the "N" in National) to Pk 5406 (NW of Square Lk.) .....° ..... miles

From Pk 5406 to Pk 5862 (on S ridge of TFJ, SW of Martin Lake) .....° ..... miles

Pk 5862 to Pk 5416 (NW of Little Lake, in the NE quadrant of the map) .....° ..... miles

5. What feature lies 311° and .55 linear miles from the center of Booth Lake? .....

6. How long is the section of trail that starts at the trail junction on the east side of Booth Lake, continues on the west side of Square Lake, and ends at the junction with the Pacific Crest Trail (PCT)? The PCT runs N-S and is denoted by a broken red line.

..... linear miles ..... trail miles (adjusted for slope error)  
*(remember, multiply linear distance by 1.3 to convert linear distance to trail distance)*

7. You are on a trail somewhere northwest of Square Lake. A bearing on Peak 5406 (NW of Square Lake) reads 266°. Where are you? Describe your location using the landmark reference system.

NOTE: When using the Landmark Reference System provide the following information:

- a) the distance and bearing **FROM** a prominent feature **TO** your location, and
- b) the physical description of your location (*including elevation*).

For example: In a depression at exactly 6800' and 4.2 linear miles, at a bearing of 210° from the summit of Three Fingered Jack. For the purposes of this question, use the center of Square Lake as the prominent feature. Where are you? FYI, this is a possible campsite.

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8. What are the UTM coordinates of the location calculated in Q7? .....

For information about reading UTM coordinates, download the pdf article "*Finding Map Locations Using Grid Coordinates*" from the bottom of the Wilderness Survival web page titled "Reading Assignments and Lecture Notes" ([http://opp.uoregon.edu/wild/course\\_resources/course\\_docs.html](http://opp.uoregon.edu/wild/course_resources/course_docs.html)). The article is password protected ( wild1 ).

9. You decide to practice your triangulation skills. Bearings to surrounding features from your location read as follows: 232° to Peak 5153 (SW of Square Lake), 279° to Peak 5203 (directly N of Square Lake), and 354° to peak 5416 (NW of Little Lake in the NE quadrant of the map. Describe your location using the landmark reference system, as you did in Q7. For the purposes of this question, use the center of Square Lake as the prominent landmark reference feature. Where are you?

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12. What is the net elevation difference between the parking lot (Santiam Snow Park) and the location identified in Q7 (a potential camping location)? .....