Formal Geometry Ch 8 Review Worksheet #1

Name_

1) In the diagram shown, the line of sight from the park ranger station, P, to the lifeguard chair, L, on the beach of a lake is perpendicular to the path joining the campground, C, and the first aid station, F. The campground is 0.25 miles from the lifeguard chair. The straight paths from both the campground and first stations to the park ranger station are perpendicular. If the path to the park ranger station to the campground is 0.55 miles, Gerald believes the distance from the first aid station to the campground is at least 1.5 miles. Is Gerald correct? Show work to provide evidence for your conclusion.

F

2) Given $\triangle ABC \sim \triangle DEF$ with $\angle B$ and $\angle E$ right angles, select **all** expressions that are equivalent to $\cos A$.

A) cos B	D) sin C	G) cos F
B) sin A	E) cos D	H) sin F
C) cos C	F) sin D	I) sin E

3) In right $\triangle ABC$, $m \angle B \neq m \angle C$. Let $\sin B = r$ and $\cos B = s$. Write an expression that represents $\sin C - \cos C$ in terms of r and s.

4) Charlie wants to swim across a river that is 400 meters wide. He begins swimming perpendicular to the shore he started from, but he ends up on the opposite side 100 meters down river from where he started due to the current. Carter starts swimming from the same spot as Charlie and ends up 50 meters further down river than Charlie. How much farther did Carter swim? Round your answer to the nearest meter.





For #5-6: A flagpole is at the top of a building. A person is standing 100 feet from the base of the building. The angle of elevation to the top of the pole is 42°, and the angle of elevation to the bottom of the pole is 39°.

5) Find the height of the building to the nearest foot.



6) Find the length of the flagpole to the nearest foot.

For #7 – 10, find the variable(s), rounded to the nearest hundredth. 7) $5 44^{\circ}$ x° 20 17





11) Find *x* to the nearest hundredth.



12) Find *x* to the nearest hundredth.



13) Solve for *x*. No calculator!



15) Find x. No calculator!



14) Find *x* and *y*. No calculator!





17) Find *x* and *y*. No calculator.

18) Find *x* and *y*. No calculator.





For #19 – 21: Solve for the variables (no calculator). If needed, leave answers in radical form.



22. If Captain Jack Sparrows' treasure map reads that to find the treasure ye must walk 6 paces north from the stump, 12 paces west, 10 paces north, and 18 paces west. How far from the stump is the treasure?

23. Classify a triangle with sides of length 5, 11, and 13 as acute, right, or obtuse.







Answers:

1) No, he is not correct. The distance from the first aid station to the campground is 1.21 miles. Work must be shown!