Trigonometry Worksheet 8

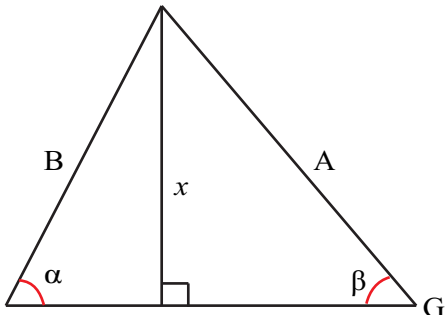

Figure 1

Refer to Figure 1 to complete the questions 1 - 6 to prove the Law of Sines.

1. Find $\sin\alpha$.

2. Find $\sin\beta$.

3. Solve for x in terms of β.

4. Solve for x in terms of α.

5. Prove the Law of Sines.

6. In a triangle, side x is opposite a 23° angle and a side length of 17 is opposite a 38° angle. What is the value of x?

7. In a triangle where the side opposite a 104° angle has length 5, find the length of the side opposite a 42° angle.

8. An angle of 65° is contained in between two sides of lengths 12 and 14. What is the side opposite the 65° angle?

9. In a triangle with adjacent sides of length 10 and 22, and the included angle measuring 17°, find the length of the third side.

10. A triangle has side lengths of 18, 23, and 31. What is the measure of the angle opposite the side of length 18?
