Sketch the following angles

1.  2.  3. Bearing of  4. Bearing of 



5. Find the unknown angle measures and side lengths.



c.

6. The sides a, b, c ofhave lengths of 8.39 units, 4.22 units and 6.24 units, respectively. Find all of the unknown angle measures.

7. Determine the approximate length ofif, inand

8. A ship travels due west for 86 miles. It then travels in a northern direction for 71 miles and ends up 139 miles from its original position. How many degrees did it turn when it changed direction

9. Two airplanes pass over Skyline at the same time. One is cruising along at  on a bearing of  while the other is cruising at  on a bearing of . Draw a picture to represent this situation and determine how far apart they will be after 3 hours.

10. What is the measure of the largest angle of a triangular garden whose sides measure 12.5 feet, 19.8 feet, and 15.7 feet?

11. Find the area of the triangular garden in 10.

12. Sara and Geoff hiked 2.5 miles on a bearing of  . Then they turned and hiked an additional 3.1 miles on a bearing of . How far were they from their starting point?

13. A ship travels due west for 95 miles. It then travels in a northern direction for 70 miles and ends up 137 miles from its original position. How many degrees did it turn when it changed direction?

14. Forest Gump is running due East for the day. When he starts his run he notices a tower at a bearing of 28 degrees from him. After running 4 miles (1 mile = 5280 feet ) he spots the same tower at a bearing of 322 degrees. Draw a picture depicting this situation and find out how far he was from the tower when he started his run and when he spotted it four miles later.

15. A cable 160 meters long runs from ground level to the top of a tower. The cable forms an angle of 45° to the horizontal. The cable is to be replaced by a new cable attached to the ground 30 meters closer to the tower. How long must the new cable be?

16. Determine the area of a triangle having the following measurements. 

17. Determine the number of triangles that can be made with the following dimensions.

a. ** b. **

18. Given **** solve the triangle(s).

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