Kuta Software - Infinite Algebra 2

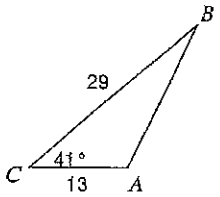
Name_____

The Law of Cosines

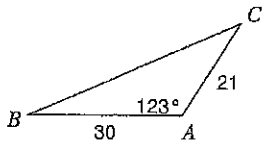
Date_____ Period____

Find each measurement indicated. Round your answers to the nearest tenth.

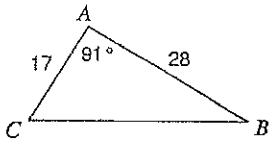
1) Find AB



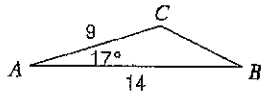
2) Find BC



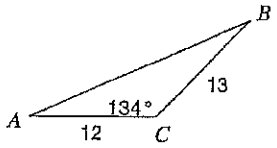
3) Find BC



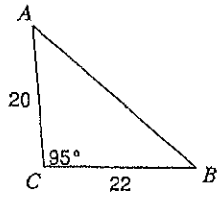
4) Find BC



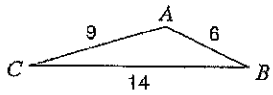
5) Find AB



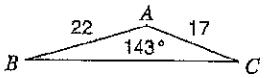
6) Find AB



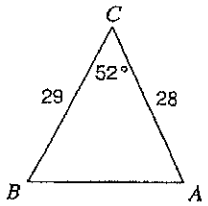
7) Find $m\angle A$



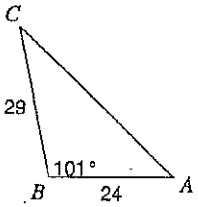
8) Find $m\angle B$



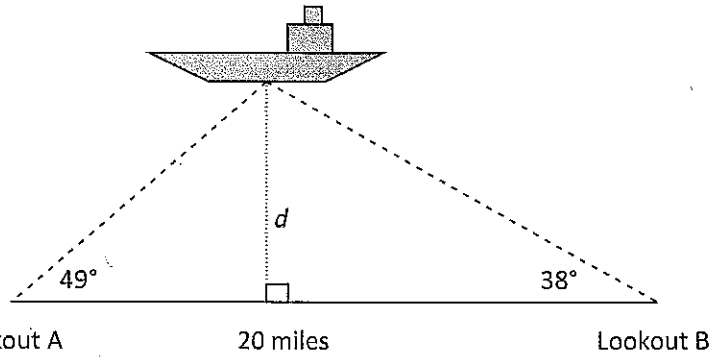
9) Find $m\angle A$



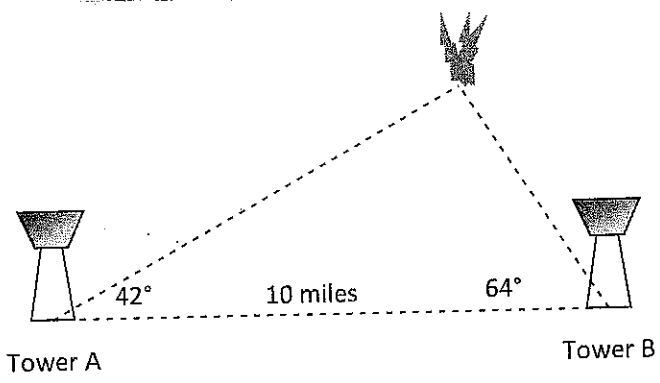
10) Find $m\angle C$



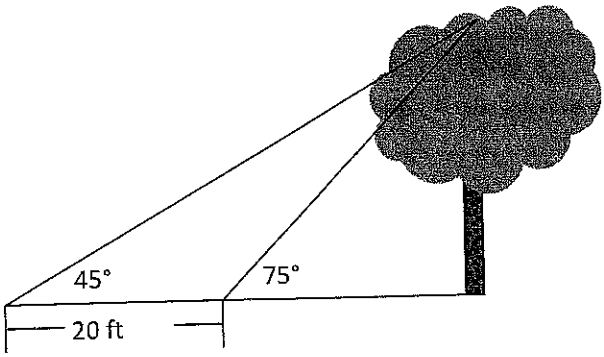
11. Triangulation can be used to find the location of an object by measuring the angles to the object from two points at the end of a baseline. Two lookouts 20 miles apart on the coast spot a ship at sea. Using the figure below find the distance, d, the ship is from shore to the nearest tenth of a mile.



12. Fire towers A and B are located 10 miles apart. They use the direction of the other tower as 0°. Rangers at fire tower A spots a fire at 42°, and rangers at fire tower B spot the same fire at 64°. How far from tower A is the fire to the nearest tenth of a mile?



13. Find the height of the tree below to the nearest foot.

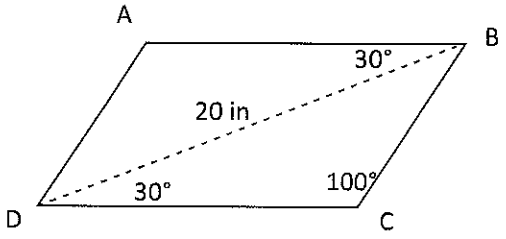


14. Can sin A be greater than 1? Why or why not?

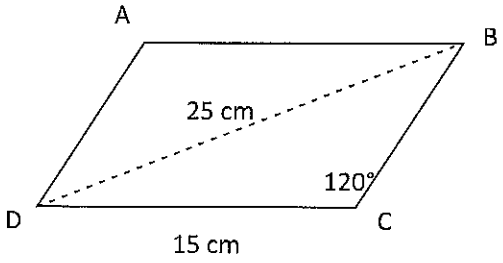
15. For ΔABC, $b = 45, c = 11$, and $m\angle B = 123°$. Find $m\angle C$ to the nearest whole degree.

16. For ΔDEF, $e = 98$, $m\angle D = 52°$, $m\angle E = 71°$, and $m\angle F = 57°$. Find d to the nearest whole degree.

17. For parallelogram ABCD below find BC to the nearest tenth.

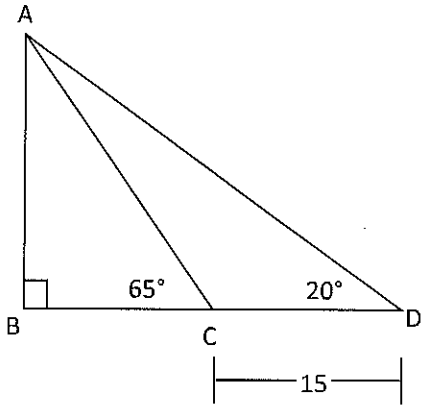


18. For parallelogram ABCD below find $m\angle DBC$ to the nearest whole degree.

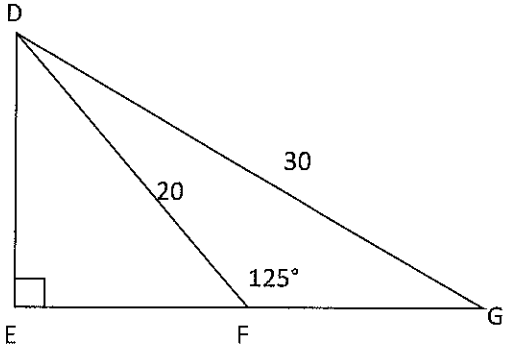


III. Challenge Problems

19. For the figure below find BC to the nearest whole number. CD=15.



20. For the figure below find $m\angle EDG$ to the nearest whole degree.



21. Find the height of the building in the figure below to the nearest foot.