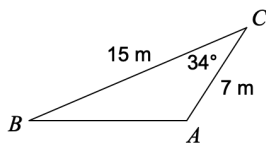


## 9.4 HW: Area, Law of Sines, and Law of Cosines

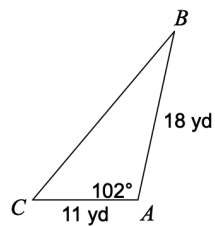
1. Explain how you would choose between using the Law of Sines and the Law of Cosines when finding the measure of a missing side or angle? In other words, what information do you need for each law?

Find each measurement indicated. Round all side lengths to the nearest hundredth and all angles to the nearest whole number.

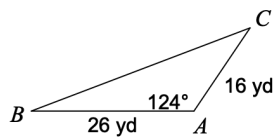
2. Find AB



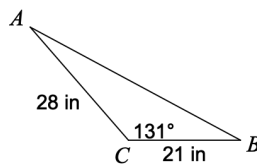
3. Find BC



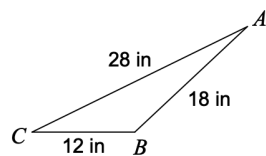
4. Find BC



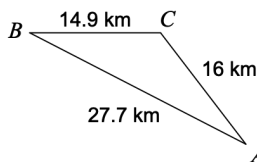
5. Find AB



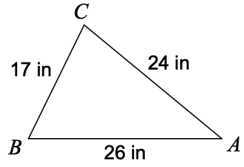
6. Find  $m\angle B$



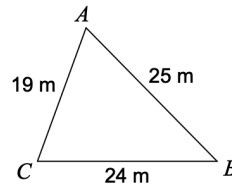
7. Find  $m\angle A$



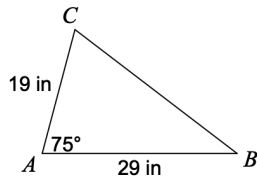
8. Find  $m\angle B$



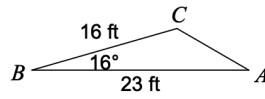
9. Find  $m\angle A$



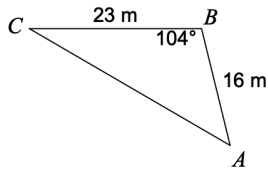
10. Find  $m\angle B$



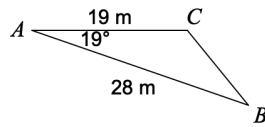
11. Find  $m\angle C$



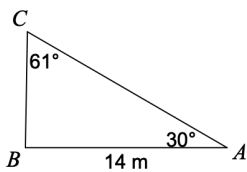
12. Find  $m\angle C$



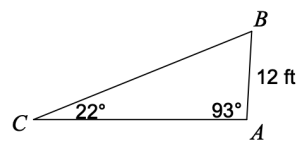
13. Find  $m\angle B$



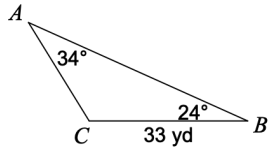
14. Find BC



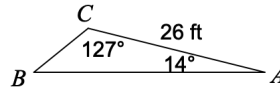
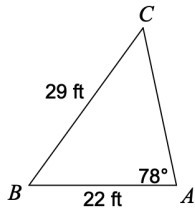
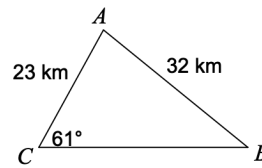
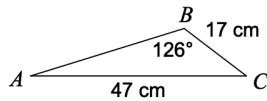
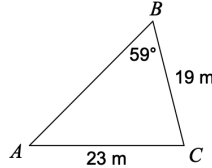
15. Find BC



16. Find AC



17. Find BC

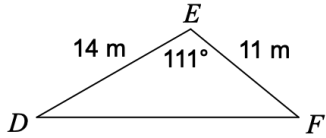
18. Find  $m\angle C$ 19. Find  $m\angle B$ 20. Find  $m\angle A$ 21. Find  $m\angle A$ 

22. A map shows the location of three cities that form a triangle with a  $72^\circ$  angle between two sides that represent distances 2.8 miles and 4.2 miles. What is the distance represented by the length of the third side? Hint: DRAW A PICTURE!

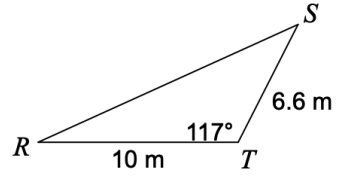
23. Does the Law of Cosines apply to a right triangle? That is, does  $c^2 = a^2 + b^2 - 2ab \cos C$  still work when  $\angle C$  is a right angle? Justify your answer.

Find the area of each triangle. Round your answer to the nearest hundredth.

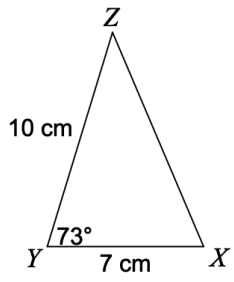
24.



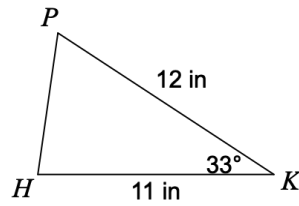
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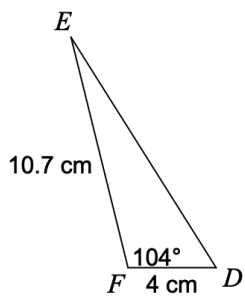
26.



27.



28.



29.

