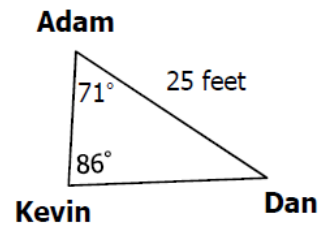


# Law of Sines and Law of Cosines Applications

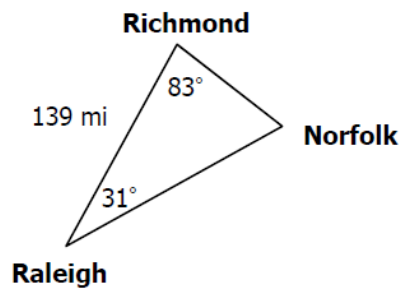
## Law of Sines

Give side measures to the nearest tenth and angle measures to the nearest degree.

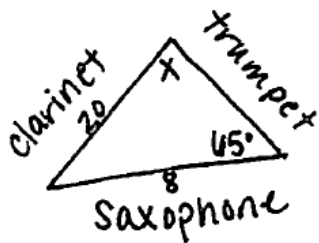
- 1) Kevin, Adam, and Dan are passing a hockey puck. How far is Kevin from Adam? How far is Dan from Kevin?



- 2) A pilot flying over the Norfolk airport is told he will have to redirect and land in either Richmond or Raleigh. Due to air traffic, he is then told he must land in Raleigh. Find the distance he will travel.



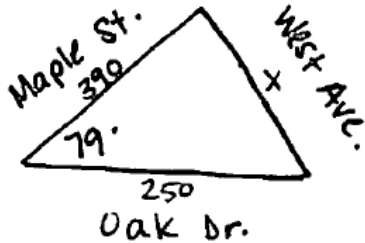
- 3) Part of a marching band formed a triangle with the trumpet players on one side, clarinet players on one side, and saxophone players on the third side. The angle formed by the trumpet and saxophone players measured  $65^\circ$ . If the clarinet line is 20 feet long and the saxophone line is 8 feet long, find the angle formed by the trumpet and clarinet players.



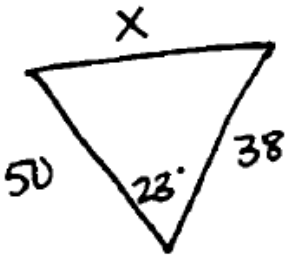
## Law of Cosines

Give side measures to the nearest tenth and angle measures to the nearest degree.

- 4) Maple Street, Oak Drive, and West Ave intersect to form a triangular piece of land. The angle formed by Maple Street and Oak Drive is  $79^\circ$ . If the Maple Street section of the triangle is 390 feet and the Oak Drive section is 250 feet, find the length of the West Ave section.



- 5) Jack and Tom start at a tree and begin running apart with an angle of  $23^\circ$  between them. If Jack runs 50 meters and Tom runs 38 meters, find the distance between them.



- 6) Two radar stations 2.5 miles apart are tracking an airplane. The straight-line distance between Station A and the plane is 7 miles. The straight-line distance between Station B and the plane is 9 miles. What is the angle of elevation from Station B to the plane?

