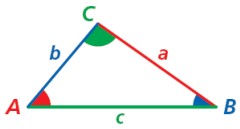
Geometry – 8.5 Notes

The Law of Sines and Law of Cosines can be used to find side and angle measures in _____ type of Δ.

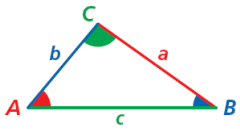
The Law of Sines: For any ΔABC with side lengths a, b, and c…



You can use the Law of Sines when you have…

- _____
- _____

The Law of Cosines: For any ΔABC with side lengths a, b, and c…

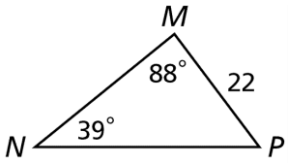


You can use the Law of Cosines when you have…

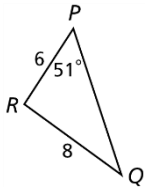
- _____
- _____

Examples:
For #1-4, find each missing measure. Round lengths to the nearest tenth and angle measures to the nearest degree.

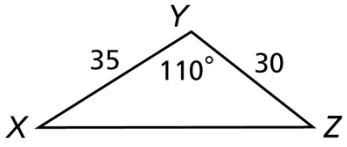
1. Find ∠Q, ∠R, and PQ



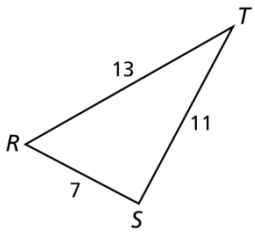
2. Find ∠P, MN, and PN



3. Find XZ, ∠X and ∠Z

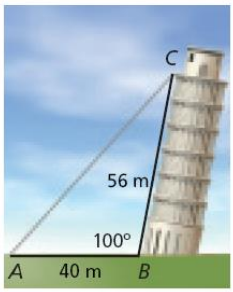


4. Find ∠R, ∠T, and ∠S



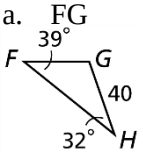
5. A sailing club has planned a triangular racecourse, as shown in the diagram. How long is the leg of the race along BC? How many degrees must competitors turn at point C? Round the length to the nearest tenth and the angle measure to the nearest degree.

6. Another engineer suggested using a cable attached from the top of the tower to a point 31 m from the base. How long would this cable be, and what angle would it make with the ground? Round the length to the nearest tenth and the angle measure to the nearest degree.

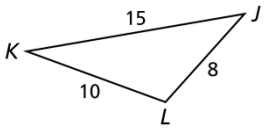


7. Use the diagrams below to determine whether you could use the Law of Sines of Law of Cosines to find the indicated side or angle.

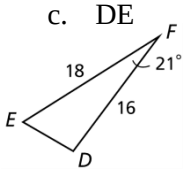
a. FG



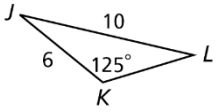
b. m∠K



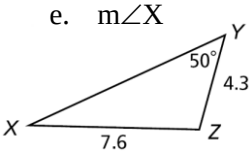
c. DE



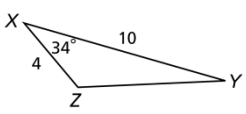
d. m∠L



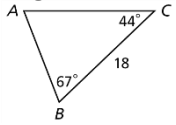
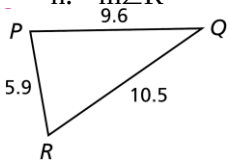
e. m∠X



f. YZ



g. AC



h. m∠R