Name _____

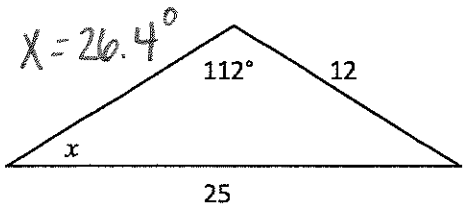
Geo Quiz Review

II. Determine whether the Law of Cosines or the Law of Sines is the best choice.

1. State whether the Law of Sines or Law of Cosines is the best choice to solve for x for the given figure. Substitute the values into the appropriate formula and solve).

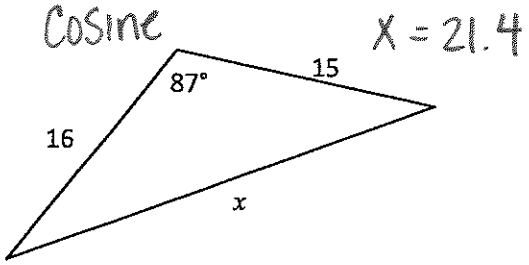
Sines

$x = 26.4°$



2. State whether the Law of Sines or Law of Cosines is the best choice to solve for x for the given figure. Substitute the values into the appropriate formula and solve).

Cosine $x = 21.4$



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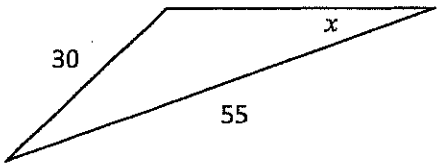
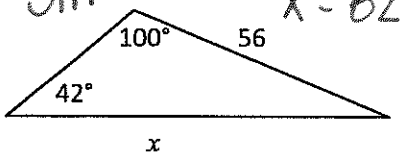
Cos $x = 30.9$



4. State whether the Law of Sines or Law of Cosines is the best choice to solve for x for the given figure. Substitute the values into the appropriate formula and solve).

Sin $x = 82.4$



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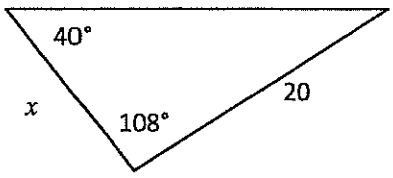
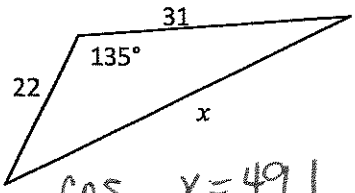


Sin $x = 16.5$

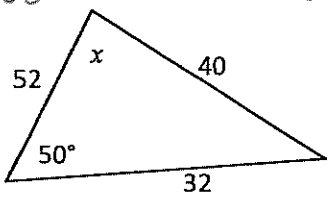
6. State whether the Law of Sines or Law of Cosines is the best choice to solve for x for the given figure. Substitute the values into the appropriate formula and solve).



Cos $x = 49.1$

7. State whether the Law of Sines or Law of Cosines is the best choice to solve for x for the given figure. Substitute the values into the appropriate formula and solve).

COS $X = 37.96$



8. State whether the Law of Sines or Law of Cosines is the best choice to solve for x for the given figure. Substitute the values into the appropriate formula and solve).

For ΔABC find the length of b to the nearest hundredth, given $a = 17, c = 34$, and $m\angle B = 94°$. COS $X = 39.1$

9. State whether the Law of Sines or Law of Cosines is the best choice to solve for x for the given figure. Substitute the values into the appropriate formula and solve).

For ΔHJK, $j = 31$, $m\angle H = 132°$, $m\angle J = 21°$, and $m\angle K = 27°$. Find h to the nearest whole number.

Sin $X = 64.3$

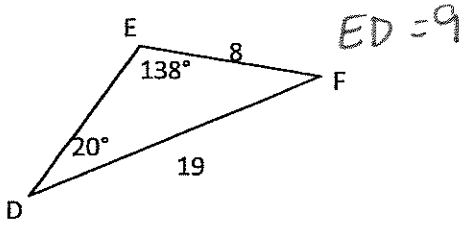
10. State whether the Law of Sines or Law of Cosines is the best choice to solve for x for the given figure. Substitute the values into the appropriate formula and solve).

For ΔXYZ find the length of $m\angle Y$ to the nearest whole degree, given $x = 6, y = 9$, and $z = 12$. COS $X = 46.6$

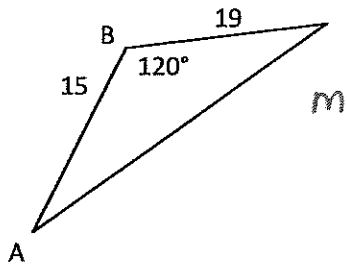
III. Use the Law of Sines and Law of Cosines to find missing dimensions.

11. Find the missing dimensions of the triangle below. Round your answers to the nearest whole number.

$\angle F = 22$ $ED = 9$

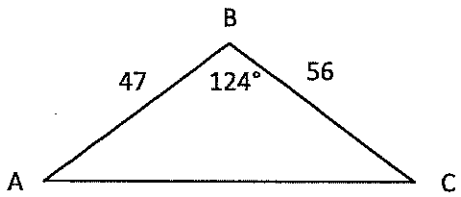


12. Find the $m\angle C$ to the nearest whole degree.



$m\angle C = 26$

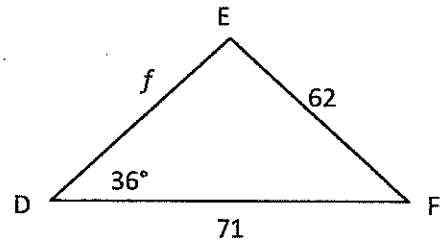
13. Find the missing dimensions of the triangle below. Round your answers to the nearest whole number.



$AC = 91$ $m\angle C = 25$

$m\angle A = 31$

14. Find the f to the nearest whole number.



$f = 103$

Solve the following word problems. For each question, draw a diagram to help you.

31) An airplane is flying at an altitude of 6000 m over the ocean directly toward a coastline. At a certain time, the angle of depression to the coastline from the airplane is 14°. How much farther (to the nearest kilometer) does the airplane have to fly before it is directly above the coastline?

2406 Km

32) From a horizontal distance of 80.0 m, the angle of elevation to the top of a flagpole is 18°. Calculate the height of the flagpole to the nearest tenth of a metre.

26.0 m

33) A 9.0 m ladder rests against the side of a wall. The bottom of the ladder is 1.5 m from the base of the wall. Determine the measure of the angle between the ladder and the ground, to the nearest degree.

80°

34) The angle of depression from the sun is 68° when a tree casts a shadow 14.3 m long. How tall is the tree, to the nearest tenth of a metre?

35.4 m

35) A wheelchair ramp is 4.2 m long. It rises 0.7 m. What is its angle of inclination to the nearest degree?

10°

36) A person flying a kite has released 176 m of string. The string makes an angle of 27° with the ground. How high is the kite? How far away is the kite horizontally? Answer to the nearest metre.

80 m ; 157 m