**Learning Target 45 Homework**

*"I can use the Law of Sines."*

- 1)** In  $\triangle PQR$ ,  $PR = 4$ ,  $QR = 1$ , and  $m\angle R = 105$ . Thraxor used the Law of Sines to set up the proportion below to find  $m\angle P$ . Explain his error in one to two complete sentences.

$$\frac{P}{\sin 1} = \frac{105}{\sin 4}$$

- 2)** In  $\triangle ABC$ ,  $AB = 7$ ,  $BC = 10$ , and  $m\angle A = 80$ . What is  $m\angle C$ ? *Round to the nearest degree.*

For questions 3 and 4, use  $\triangle GHK$  where  $GK = 16$ ,  $m\angle G = 30$ , and  $m\angle H = 62$ .

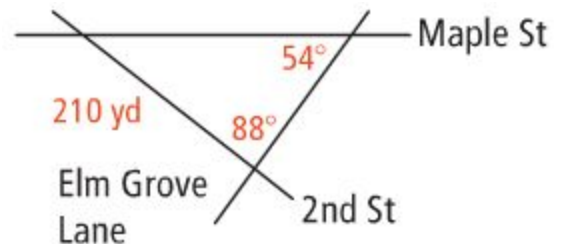
- 3)** What is  $GH$ ? *Round to the nearest tenth.*

- 4)** What is  $HK$ ? *Round to the nearest tenth.*

5) In  $\triangle ABC$ ,  $m\angle A = 70$ ,  $m\angle C = 62$  and  $BC = 7.3$ . What is  $AB$ ? Round to the nearest tenth.

6) In  $\triangle XYZ$ ,  $XY = 14$ ,  $XZ = 17$ , and  $m\angle Y = 80$ . What is  $m\angle Z$ ? Round to the nearest degree.

7) A portion of a city map is shown in the diagram. If you walk along Maple Street between 2nd Street and Elm Grove Lane, how far do you walk? Round to the nearest tenth of the yard.



8) A zipline is a long cable or rope strung high over the ground. People wear harnesses hooked to the cable and slide down for fun. This zipline is constructed over a ravine as shown in the diagram. What is the horizontal distance from the bottom of the ladder to the platform where the zipline ends? Round your answer to the nearest tenth of a foot.

