**7.6 Trigonometric Ratios in Complex Situation Assignment**

1. What is the length of **x**?



2. Calculate the measure of angle **θ**.



3. Find each of the indicated sides.



4. Find the angle of offset between the two pipes. How long is the travel pipe?



5. A surveyor must determine the distance, AB, across a river. He stands at point C, downriver 500 m from B, and using his theodolite, measures the angle of vision to A as 28°. How wide is the river?



6. Pauline is building a fence around her vegetable garden, shown below. What length of fence will she need to build?



7. Soo-Jin is building a fence around his patio. Using the diagram below, calculate the amount of fencing he will need to buy.



 House is here (no fence necessary)