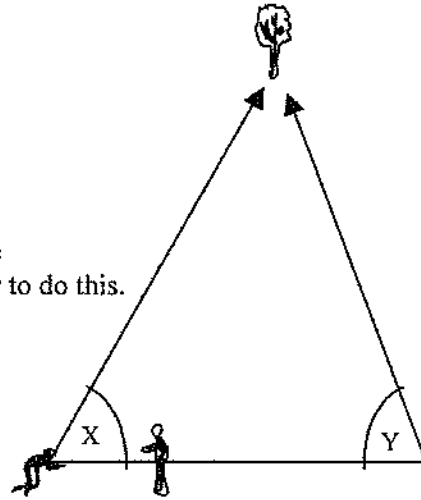


Part Two:

A group of students went to a park to practice their triangulation skills. They picked an object far away, set up a baseline, and measured the angle to their object at each end of the baseline, (see diagram). Their results are shown here.

Group	Baseline length (m)	angle X	angle Y
A	46	75°	78°
B	20	81°	77°
C	89	55°	71°



1. For each of the groups, use a scale diagram to find the distance to the far object. You will need to use a separate sheet of paper to do this.

Later the students measured the actual distances to the objects. Their results are recorded here.

Group	measured distance (m)
A	96
B	51
C	85

2. Compare your results with the measured results shown. How close were you? Express this as a percent error. (calculated/actual *100%)

3. Which group might be expected to get the closest result to the actual measured distance? Which group might be expected to get the least close result? Explain your reasoning.

4. Suppose that you were going to do this experiment. You pick a tree about 200 m away and set up a baseline 40 m long directly opposite the tree. What angles should you expect to be measuring?