Simulating a Geometric Survey

In a group of up to four, calculate the following using similar triangles:

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1. The width of the track.

2. The inside diameter of the track.

For #1, pretend the track is a raging river of lava. You are on the grass inside the track can not get to the other side but you are tasked with calculating the width of the lava river.

For #2 Use your imagination to picture a massive, sinkhole that stretches across the entire width of the track. You are tasked with calculating the inside width of the sink hole - catch is you can not cross the running track.

Width of track

Inside diameter
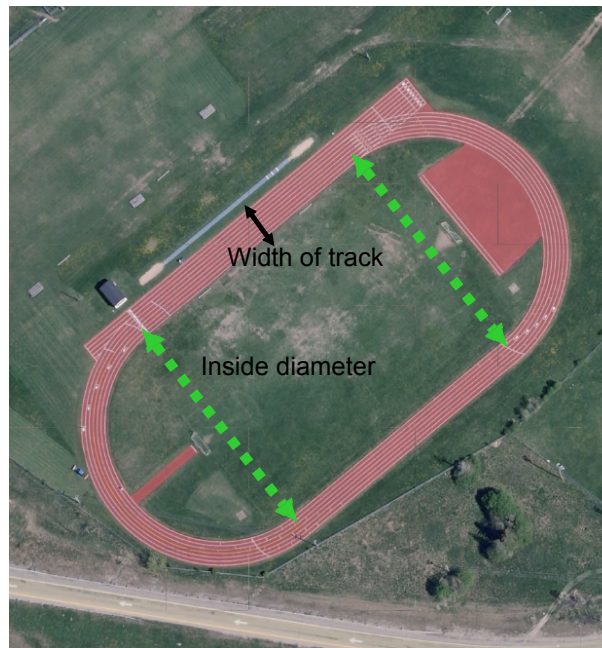
- Devise a plan of action. Provide a sketch of the measurements you need to take. Your sketch should show the lava river and the similar triangles you want to create and where you will measure distances and angles.
- Describe in words the steps you will take to complete each survey.
- Carry out your plan. Provide a new sketch with your measurements.
- Calculate the width or diameter to one decimal place. Show your calculations.

Follow up Questions
1. Which survey did you find the most challenging to get measurements for? Provide an explanation.
2. What were some factors that may have prevented you from getting accurate results?
3. Where around the city could you use each similar triangle method and for what purpose?