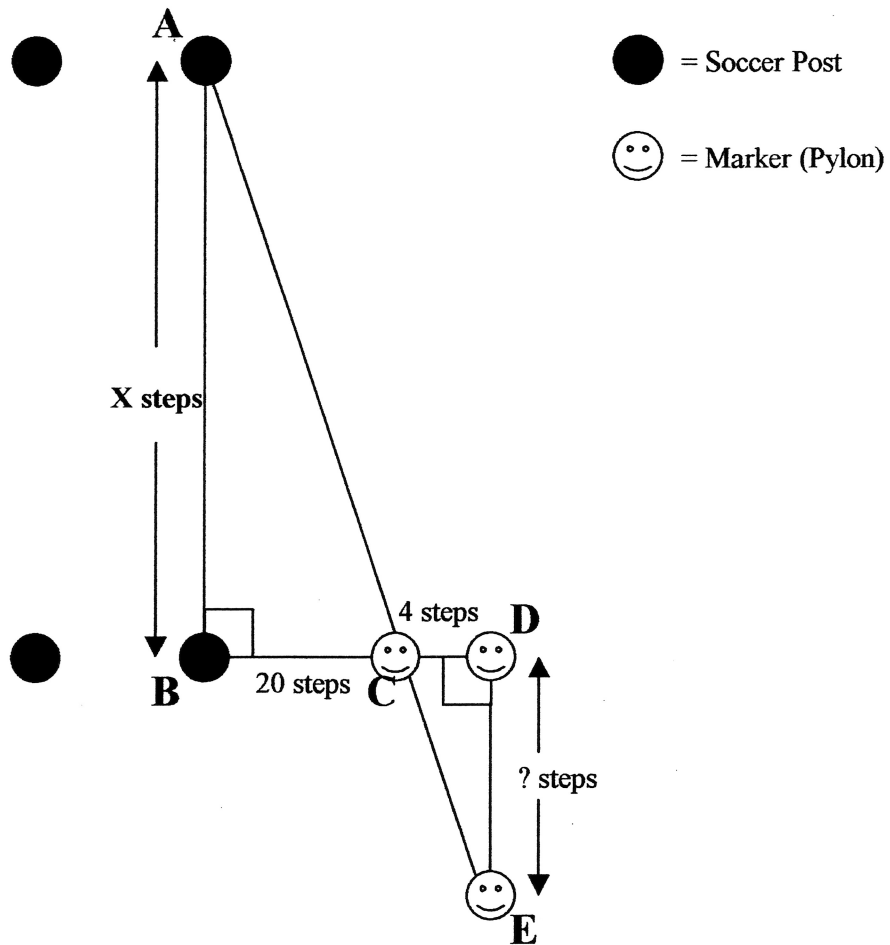


Measuring Distances Using Similar Triangles

For this activity, we will be measuring the distance across the football field.

We will use walking steps as a measuring tool and pylons as markers. See diagram below.



Step 1.

Show that $\triangle ABC \sim \triangle EDC$

Step 2.

- Go outside and walk 20 steps from the closest post and put down a marker (point C).
- Walk another 3 steps and put down another marker (point D).
- Turn so that you are facing upfield and walk backwards until marker C lines up with the far post (point A).
- Measure the number of steps between point D and E and record it: Length of line segment DE = _____
- Measure the length of steps between A and B to compare our calculated result to the actual length: Length of AB = _____.

Step 3.

Use the measurement in step 2 and your knowledge of similar triangles to determine the length across the field.

Since $\triangle ABC \sim \triangle EDC$

Step 4.

Did using similar triangles produce a good estimate of the distance across the field?