Mathematics, Geometry Unit IX: Lesson 3

Application: There's a Race to be Run



A track is laid out in the form of a rectangle with a semicircle at each end.

Obviously the runner on the inside of the track runs a shorter distance than the one on the outside. To make equal distances for runners in each lane of the track, starting positions are staggered.

Measure the track at your school to find the dimensions of the rectangle and radius of the semicircle. Divide the track into four or more lanes. Calculate the distance around the track for each lane. Find the starting position for each lane for a 100 yard dash, 440 yard run, and 880 yard run so that the runner in each lane covers the same distance.

Draw a scale drawing of the track for each race with the starting positions and finish line indicated. Include your measurements. Compare your results to what is actually done by the PE department.