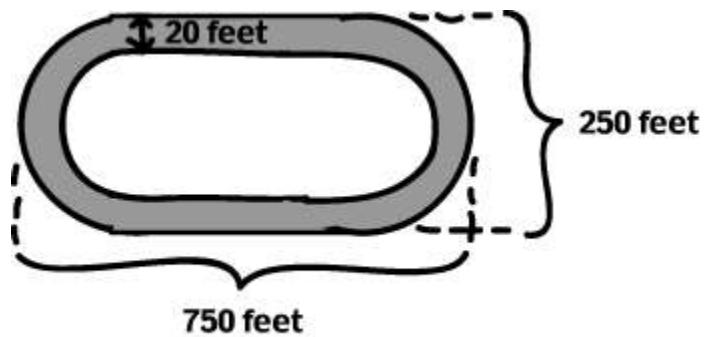Dear Mathematics Student,

My name is John Stemko, and I run a small paving business in town. I am contacting you because I've just been offered a job repaving the Kly Auto Racing Speedway. The problem is that I don't know how much asphalt I'll need. With a straight stretch of road (which is what I usually work on), its easy enough to calculate the area -- everybody knows how to find areas of rectangles! But the racetrack area is a rectangle with two half-circles attached, and I am only repaving the track, which is 20 feet wide all the way around. I've drawn a rough sketch of the racetrack (where the dark gray area is what I have to pave):

I greatly appreciate any assistance you can give me in finding the area of the track that I have to pave.

With Thanks,

John Stemko

John Stemko