

(12.) The city council is planning to construct a new sports ground in the shape of a rectangle with semicircular ends. A running track 400 meters long is to go around the perimeter.

(a) (6 pts) What choice of dimensions will make the rectangular area in the center as large as possible?

(b) (4 pts) What should the dimensions be if the total area enclosed by the running track is to be as large as possible?

Good luck, and a happy spring and summer to each of you!