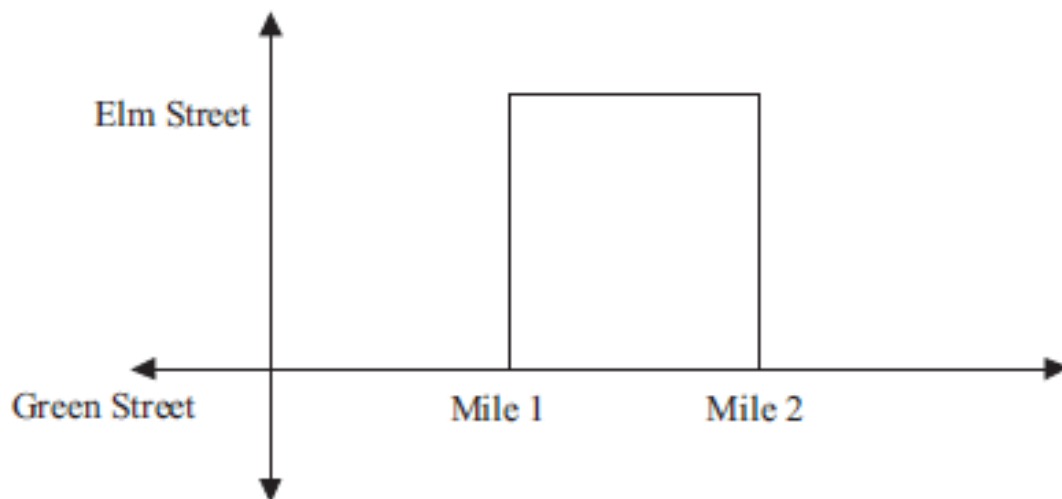




Cross-Country Cable

Jose owns a square parcel of land on the north side of Green Street. The property is on the edge of the road between the one- and two-mile markers. Elm Street runs perpendicular to Green Street and one mile west of the one-mile marker.



The cable company wants to run a cable through Jose's property from the intersection of Elm Street and Green Street. The cable must divide Jose's parcel of land into two parts that are equal in area.

1. Determine the equation of the line that will represent the path of the buried cable.
2. Determine the length of the portion of the cable that runs across Jose's property.