

## Haversine formula

```
custom_hav_dist <- function(lat1, lon1, lat2, lon2) {  
  R <- 6371  
  Radian_factor <- 0.0174533  
  lat_1 <- (90-lat1)*Radian_factor  
  lat_2 <- (90-lat2)*Radian_factor  
  diff_long <- (lon1-lon2)*Radian_factor  
  
  distance_in_km <- 6371*acos((cos(lat_1)*cos(lat_2))+  
    (sin(lat_1)*sin(lat_2)*cos(diff_long)))  
  rm(lat1, lon1, lat2, lon2)  
  return(distance_in_km*10^3)  
}  
  
custom_hav_dist(46.05590689166976, 11.133622197707451, 46.05806108185504, 11.132731839540899)  
  
## [1] 249.193
```