Problem A5

A He-Ne beam ($\lambda = 633$nm) has a waist diameter $2w_0 = 1.6$mm.

- How big is the spotsize 1km from the waist ?

- The beam is pointed to the moon. What will the spotsize $2w$ be on the moon ? (distance 380Mm)

- How big must the waist diameter be to keep the beem within 500m diameter on the moon ?