

Situation 1:

A refracting telescope has a tube length of 1.2 m and a magnification of 15X when in normal adjustment. Determine the focal length of the objective lens and the eyepiece.

Situation 2:

A microscope has a tube length of 15 cm and a magnification of 20X for an object that is 3 cm from the objective lens. Determine the focal length of the objective lens and the eyepiece.