**Condition**

A jeweler examines a diamond with a magnifying glass. If the near point distance of the jeweler is 20.8cm and the focal length of the magnifying glass is 7.50cm. Find the angular magnification when the diamond is held at the focal point of the magnifier assuming the magnifying glass is directly in front of the jeweler's eye

**Solution:**

Since the jeweler holds the diamond at the focal point of the magnifying glass, its image will be produced infinitely far away. This gives an angular magnification of

$$M = \frac{\theta'}{\theta} = \frac{N}{f} = \frac{20.8}{7.5} = 2.77$$

**Answer: $2.77$.**