23.30. **Model:** Assume the biconvex lens is a thin lens.
Visualize: Please refer to Figure Ex23.30.
Solve: If the object is on the left, then the first surface has $R_1 = +40$ cm (convex toward the object) and the second surface has $R_2 = -40$ cm (concave toward the object). The index of refraction of glass is $n = 1.50$, so the lens maker's equation is

$$\frac{1}{f} = (n-1)\left(\frac{1}{R_1} - \frac{1}{R_2}\right) = (1.50 - 1)\left(\frac{1}{40 \text{ cm}} - \frac{1}{-40 \text{ cm}}\right) \Rightarrow f = 40 \text{ cm}$$