17. We solve Eq. 35-9 for the image distance i: $i = pf/(p - f)$. The lens is diverging, so its focal length is $f = -30\,\text{cm}$. The object distance is $p = 20\,\text{cm}$. Thus,

$$i = \frac{(20\,\text{cm})(-30\,\text{cm})}{(20\,\text{cm}) - (-30\,\text{cm})} = -12\,\text{cm} \ .$$

The negative sign indicates that the image is virtual and is on the same side of the lens as the object. The ray diagram, drawn to scale, is shown on the right.