

Same size $\Rightarrow |m| = 1$

$$m = \frac{v}{u} = 1 \quad \underline{\text{OR}}$$

so $v = u$

$$m = \frac{v}{u} = -1$$

or $v = -u$

$$-\frac{1}{u} + \frac{1}{v} = \frac{1}{f}$$

$$-\frac{1}{u} + \frac{1}{-u} = \frac{1}{f}$$

$$-\frac{1}{u} + \frac{1}{u} = 0 \Rightarrow f = \infty$$

$$-\frac{2}{u} = \frac{1}{f}$$

ie. a flat piece of glass!

$$\boxed{u = -2f}$$

This means that for a converging lens ($f > 0$)
& @ real object $-2f$ ^{to left of} ~~from~~ lens,
there is a real image @ $v = +2f$
to right of lens.