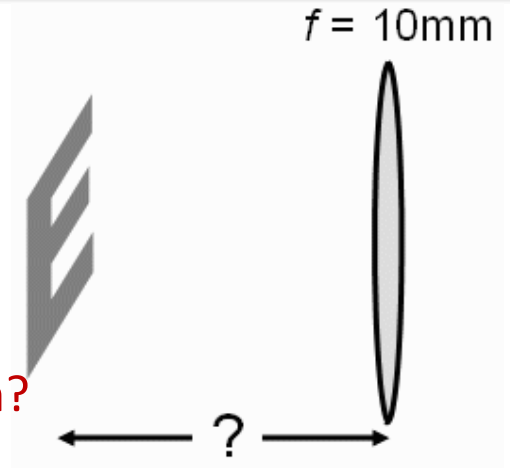




A magnifying glass is used to read the fine print on a document. The focal length of the lens is 10mm.

At what distance from the lens must the document be placed in order to obtain an image magnified by a factor of 5 that is not inverted?



How does the object distance compare to the focal length?

A) $|s| < |f|$

B) $|s| = |f|$

C) $|s| > |f|$

Lens equation $\rightarrow \frac{1}{s'} = \frac{1}{f} - \frac{1}{s}$

$\rightarrow s' = \frac{fs}{s-f}$

Virtual Image $\Rightarrow s' < 0$

Real object $\Rightarrow s > 0$

Converging lens $\Rightarrow f > 0$

$s - f < 0$

