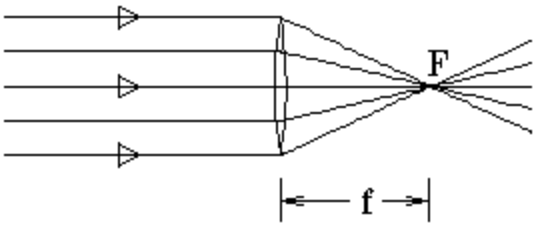
Answer on Question #46984, Physics, Optics

How many diopters are there for a converging lens with a focal length of 0.4m?

−2.5
−0.4
+0.4
+2.5

Solution:



A converging lens is said to have positive focal length. A converging lens causes exiting rays to be more convergent coming out than they were entering the lens.

The power of a lens is the inverse of the focal length.

$$P = \frac{1}{f}$$

where P is in diopters and f is in meters.

Thus,

$$P = \frac{1}{0.4} = 2.5$$

Answer: +2.5