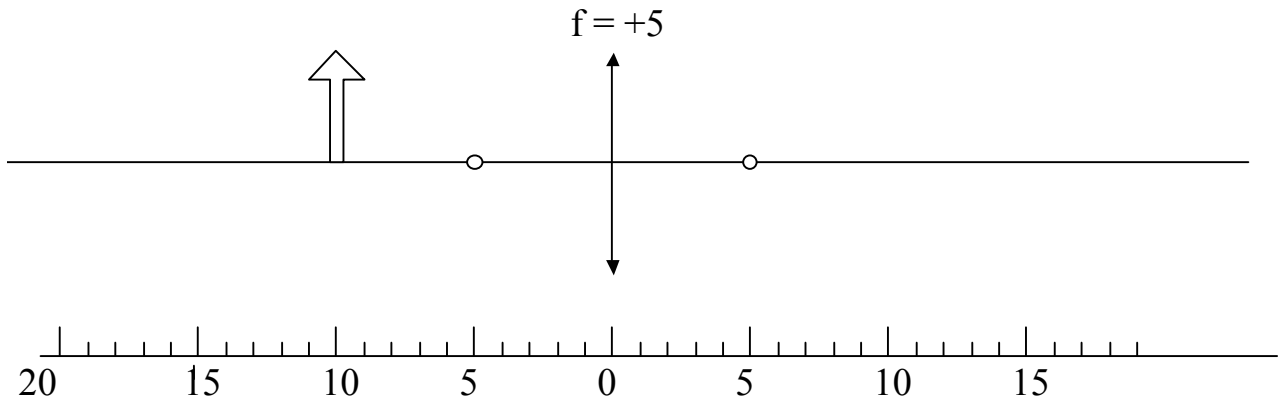


Page 1:

The lens is at "zero", focal points are shown as dots. The object ("behind the lens" is shown as an arrow. Draw at least 2 (but preferably 3!!) principle rays, and *locate the image*. You can (and should) also use our lens formula to CHECK your result...

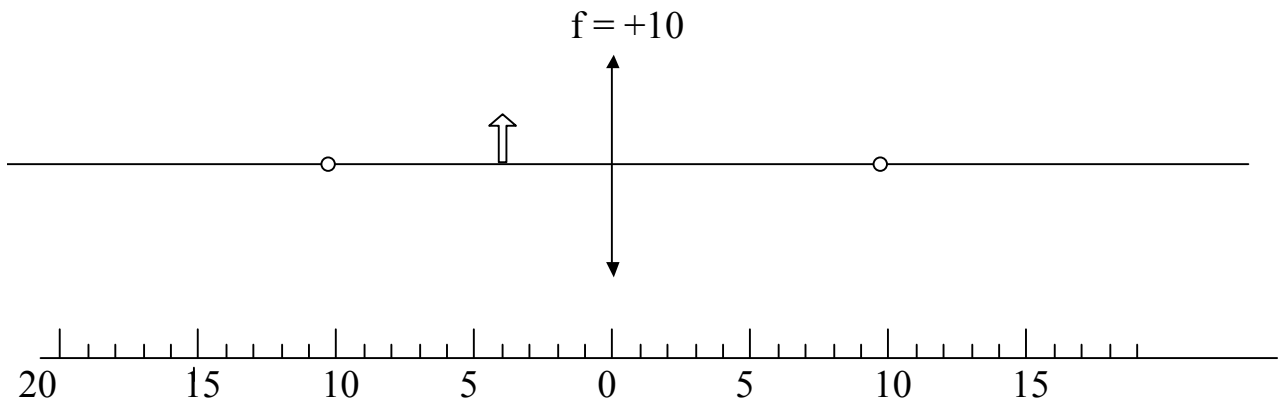
To think about: Is it upright/inverted? real/virtual? larger/smaller than the object? In front/behind the lens? Is " d_i " positive or negative? Is magnification + or -?

I) Converging lens: (Note, $d_o = +10$ here)



(We will have a clicker question on the screen, don't click till AFTER you have drawn the ray diagram and worked it out. See bottom of this page for what the clicker question will be)

II) Converging lens: (Note, $d_o = 4$ here)

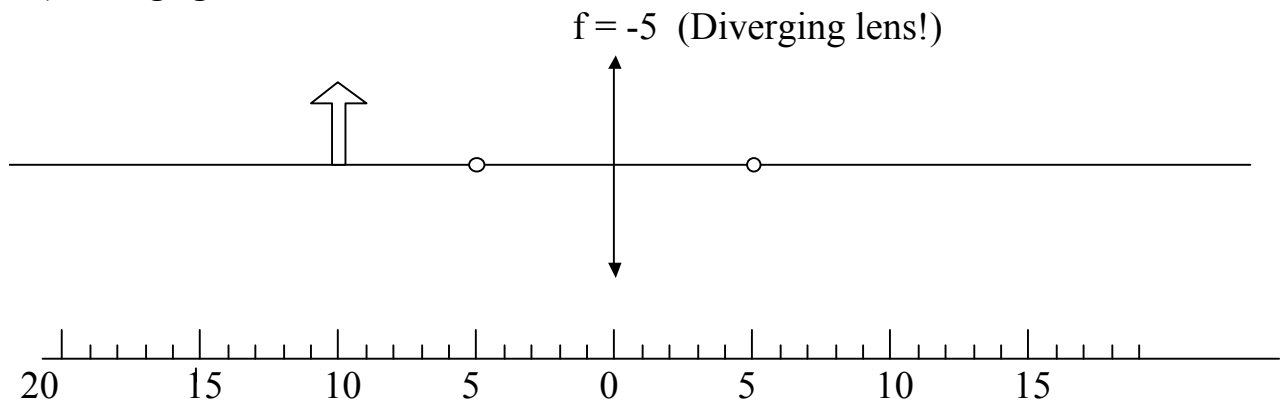


One more example on the back side!

Clicker question will be: What is the image distance, d_i

A: -10 B: -3.33 C: +10 D: +3.33 E: Other

III) Diverging lens:



If you are all done, here's one more for you: Take example III, but move the object inside the focal length, to $d_o=2.5$, and work it all out again...

- A: -10 B: -3.33 C: +10 D: +3.33 E: Other