Solve for the following ( 2 pts each correct answer ).

1. Suppose the absolute values of the radius of curvature oof the lens surfaces are bothe equal to 10 cm and the index of refraction is n=1.52. what is the focal length f of the lens?
2. A converging lens has a focal length of 20 cm. Find graphically the image location for an object at each of the following distances from the lens: a) 50 cm , b) 20 cm, c) 15 cm d) -40 cm. Determine the magnifiication in each case. Check your results by calculating the image position and magnification.
3. You are given a thin divergine lens. You find that a beam of parallel rays spread out after passing through the lens, as though all the rays came from a point 20.0 cm froom the center of the lens. You want to use the lens to form an erect virtual image that is 1/3 of the height of the object. a) Where should the object be placed? b) Draw a principal ray diagram.
4. An object 8.0 cm is placed 12.0 cm to the left of a converging of focal length 8.0 cm. A second converging lens of focal length of 6.0 cm is placed 36.0 cm to the right of the first lens. Both lenses have the same optic axis. Find the position, size, and orientation of the image produced by the two lenses in .

Honorato C. Perez Sr., Memorial Science High School

Mabini Extension, Cabanatuan City

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