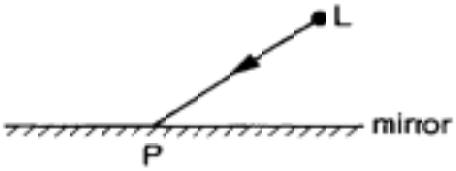
Fig. shows a view from above of a vertical mirror. A small lamp is placed at the po
marked L.



(a) One ray, LP, from the lamp has been drawn.

(i) At P, draw and label the normal to the mirror.

(ii) At P, draw and label the reflected ray.

(iii) Mark, using an X for each, two angles which are equal.

[3]

(b) Carefully mark, using a clear dot, the position of the image of the lamp. [1]

(c) If you were looking into the mirror from point L, you might see something like Fig
"looking back at you". (Apologies if you are better-looking than this!)

(i) Mark clearly with the letter R, the image of your right ear.

(ii) Your nose is 30 cm from the mirror.
How far from your nose is its image? .....

[2]

Extension 1

Fig.) shows an object placed 2.0 cm from a thin lens, which is to be glass.

The focal length of the lens is 3.0 cm. The diagram is drawn to full sca

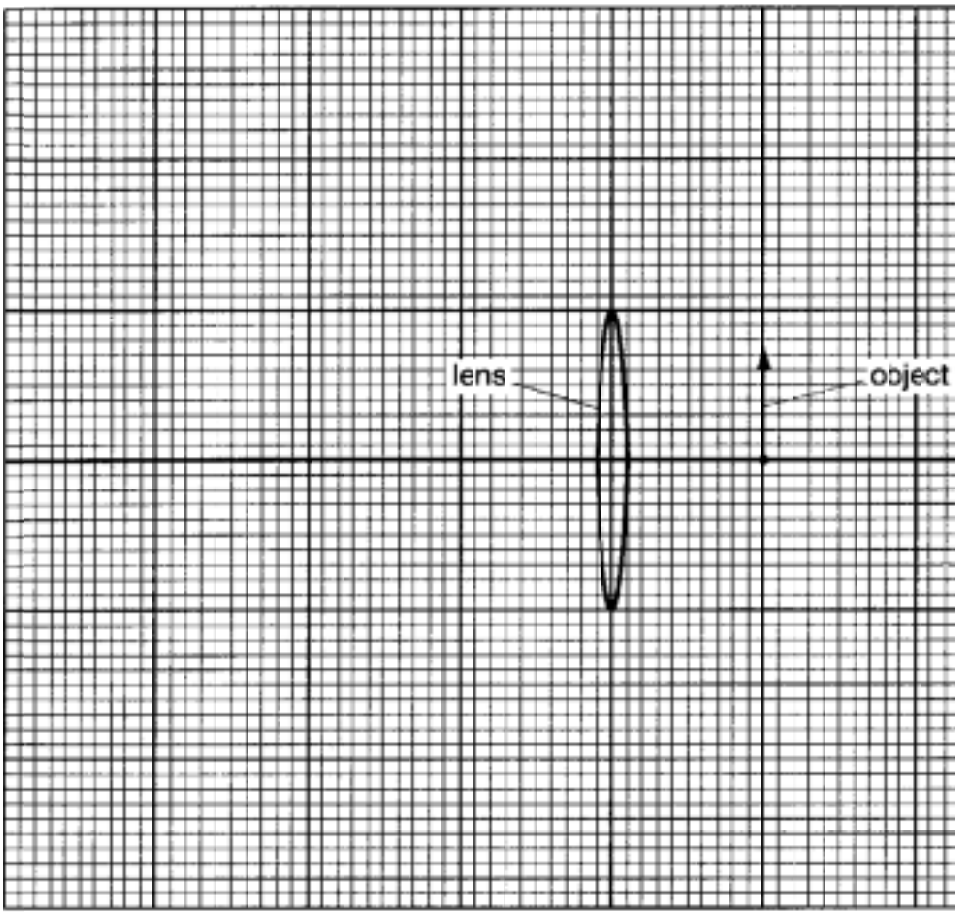


Fig. 9

(a) On Fig. , draw any two rays from the tip of the object which en tip of the image. Draw in the image and label it **I**.

(b) On Fig. , draw in an eye position which would enable image **I** t

(c) By taking measurements from Fig. , work out how many time than the object.

The image is ..... times bigger than the obj