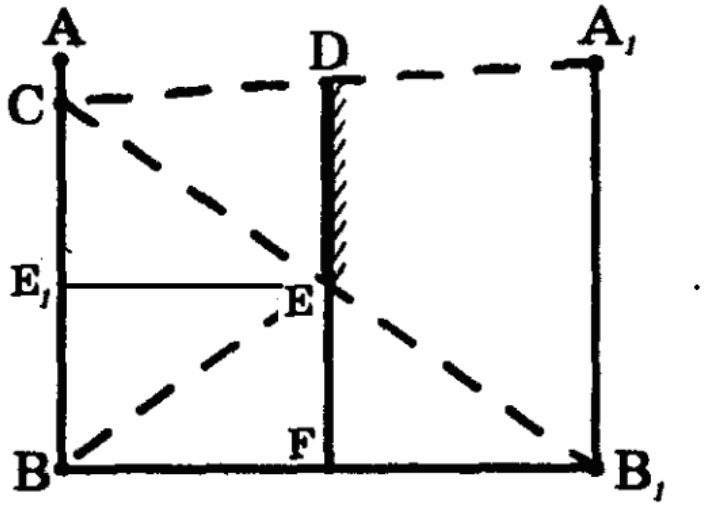
QUESTION:

A man wishes to see his full image in the mirror.The minimum lenght of the mirror required for the same, given that height of the man is H is?

SOLUTION:



Here AB=H is the height of the man, DE is the mirror and A_1B_1 is image. C is men's eyes.
As BE=EC, so BEC is an isosceles triangle, hence $BE_1=E_1C$ (EE_1 is altitude and median of BEC) and $DE=CE_1=1/2H$

ANSWER:

The height of the mirror must be $\frac{H}{2}$

The mirror must be arranged in a position opposite to an eye.