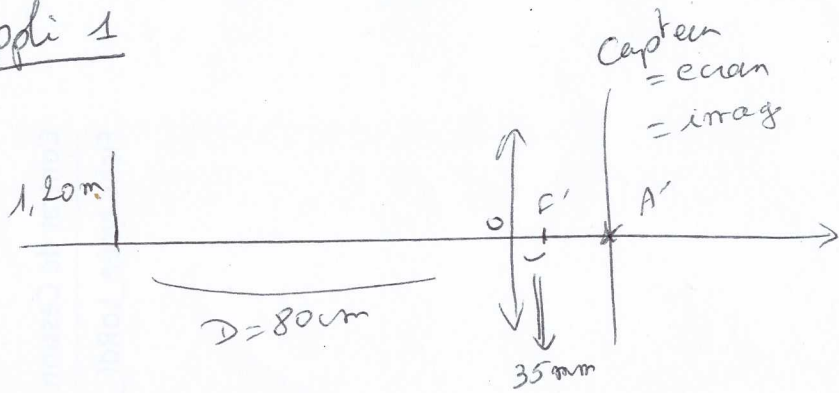


### Appli 1



$OF' = f' = 35 \text{ mm}$   
 $OA = x = -80 \text{ cm}$   
 $OA' = x' = \text{inconnue}$   
 $AB = y = 1,20 \text{ m}$   
 $A'B = y' = \text{inconnue}$

$$\frac{1}{x'} - \frac{1}{x} = \frac{1}{f'} \Leftrightarrow \frac{1}{x'} = \frac{1}{f'} + \frac{1}{x}$$

$$= \frac{1}{35 \times 10^{-3}} + \frac{1}{-0,80}$$

$$x' = \frac{1}{\frac{1}{35 \times 10^{-3}} - \frac{1}{0,80}}$$

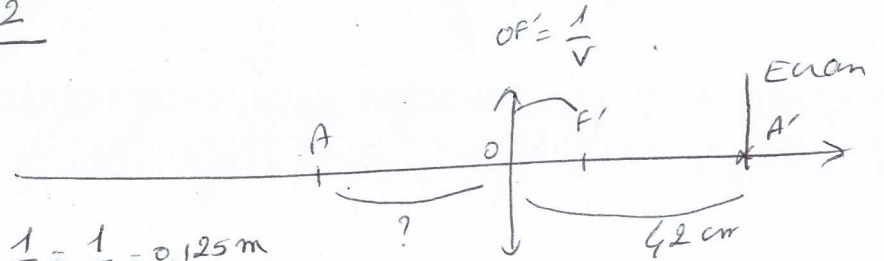
$$x' = 3,67 \times 10^{-2} \text{ m} = 3,67 \text{ cm}$$

$$\frac{x'}{x} = \frac{y'}{y} \Leftrightarrow y' = \frac{x' \times y}{x} = \frac{3,67 \text{ cm} \times 1,20 \text{ m}}{-0,80 \text{ m}} = -5,49 \text{ cm}$$

$$= -55 \text{ mm}$$

$|y'| > 36 \text{ mm}$  l'image est dépassé

### Appli 2



$OF' = \frac{1}{v} = \frac{1}{8} = 0,125 \text{ m}$   
 $OA' = 42,5 \text{ cm}$   
 $OA = \text{inconnue}$

$$\frac{1}{x'} - \frac{1}{x} = \frac{1}{f'} \Leftrightarrow \frac{1}{x} = \frac{1}{x'} + \frac{1}{f'}$$

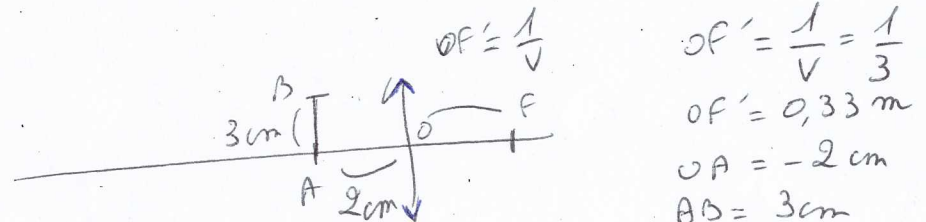
$$\frac{1}{x} = \frac{1}{42,5} - \frac{1}{12,5} = -0,0566 \text{ cm}^{-1}$$

$$x = \frac{1}{\frac{1}{x}} = -17,7 \text{ cm}$$

$$y = \frac{x'}{x} = \frac{42,5}{-17,7} = -2,37$$

l'image est plus grande et inversée

### Appli 3



$OF' = \frac{1}{v} = \frac{1}{3}$   
 $OF' = 0,33 \text{ m}$   
 $OA = -2 \text{ cm}$   
 $AB = 3 \text{ cm}$

$$\frac{1}{x'} - \frac{1}{x} = \frac{1}{f'} \Leftrightarrow \frac{1}{x'} = \frac{1}{f'} + \frac{1}{x} = v + \frac{1}{x} = 3 + \frac{1}{-2 \times 10^{-2}} = -47 \text{ m}^{-1}$$

$$x' = \frac{1}{\frac{1}{x'}} = \frac{1}{-47} = -0,0213 \text{ m} = -2,13 \text{ cm}$$

$$y' = \frac{x'}{x} \times y = \frac{-2,13}{-2} \times 3 = 3,2 \text{ cm}$$

image droite avec la lentille