

2. KONTROLNA ZADACA F2 21.05.2019.

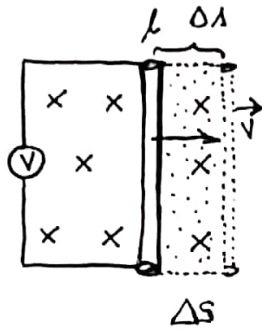
1

$$L = 1 \text{ m}$$

$$B = 2 \text{ mT}$$

$$U_i = 3 \text{ mV}$$

$$v = ?$$



$$U_i = \left| \frac{-\Delta\Phi}{\Delta t} \right|$$

$$\Phi = BS \cos\alpha - BS; \alpha = 0^\circ$$

$$\Delta\Phi = B \cdot \Delta S$$

$$\Delta S = L \cdot \Delta l = L v \Delta t$$

$$\Rightarrow U_i = \left| -\frac{B L v \Delta t}{\Delta t} \right| = | - B L v |$$

$$\Rightarrow v = \left| -\frac{U_i}{B L} \right| = \frac{3 \cdot 10^{-3}}{2 \cdot 10^{-3} \cdot 1} = \boxed{1,5 \text{ m/s}}$$

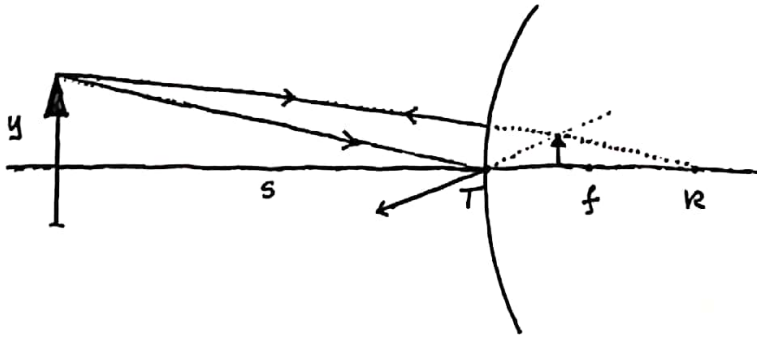
3

$$y = 16 \text{ cm}$$

$$s = 75 \text{ cm}$$

$$d = 7,2 \text{ cm} \Rightarrow R = \frac{d}{2} = (-) 3,6 \text{ cm (konveksno zrcalo)} \Rightarrow f = \frac{R}{2} = -1,8 \text{ cm}$$

$$s', y' = ?$$



SLIKA:

1. VIRTUALNA
2. USPRAVNA
3. UMANJENA

$$\frac{1}{s'} = \frac{1}{f} - \frac{1}{s} = \frac{1}{-1,8} - \frac{1}{75} \Rightarrow s' = -1,76 \text{ cm}$$

$$m = \frac{y'}{y} = -\frac{s'}{s} = -\frac{-1,76}{75} = 0,0234$$

$$y' = m \cdot y = 0,0234 \cdot 16 = 3,8 \text{ cm}$$

2 i 4 SA AV!