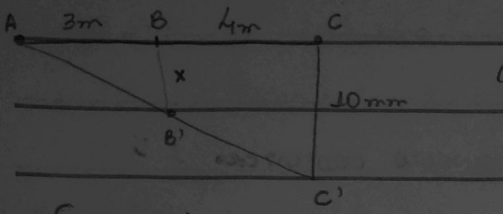
PROBLEMA 2.3

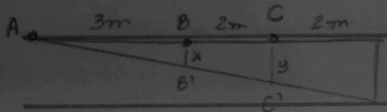


$$\frac{7000}{10} = \frac{3000}{x} \rightarrow X = 4,2857 \text{ mm}$$

$$\varepsilon_{ce} = \frac{4010 - 4000}{4000} = 0,0025 \text{ mm/mm}$$

$$\varepsilon_{BD} = \frac{4004,2857 - 4000}{4000} = 1,0714 \cdot 10^{-3} \text{ mm/mm}$$

PROBLEMA 2.5

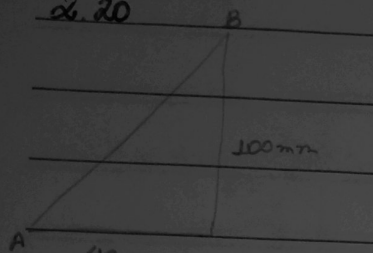


$$\frac{7000}{10} = \frac{3000}{X} \rightarrow X = 4,2857 \text{ mm} \quad \Big| \quad \frac{7000}{10} = \frac{5000}{y} \rightarrow y = 7,1428 \text{ mm}$$

$$\varepsilon_{ce} = \frac{4007,1428 - 4000}{4000} = 0,0017857 \text{ mm/mm}$$

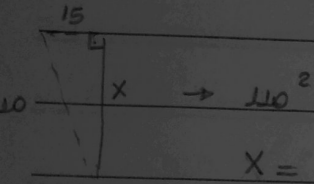
$$\varepsilon_{BD} = \frac{3004,2857 - 3000}{3000} = 0,001428 \text{ mm/mm}$$

2.20



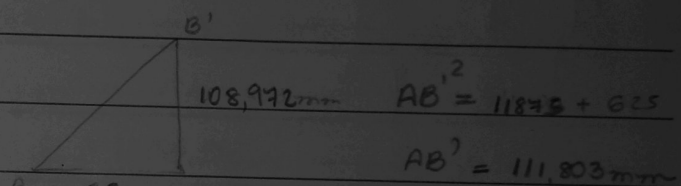
$AB^2 = 100^2 + 40^2$

$AB = \sqrt{11.600} = 107,703$ mm



$110^2 = 15^2 + X^2$

$X = \sqrt{110^2 - 15^2} \Rightarrow 108,972$ mm



$AB'^2 = 11875 + 625$

$AB' = 111,803$ mm

$\varepsilon_{AB} = \frac{111,803 - 107,703}{107,703} = 0,03806$ mm/mm