

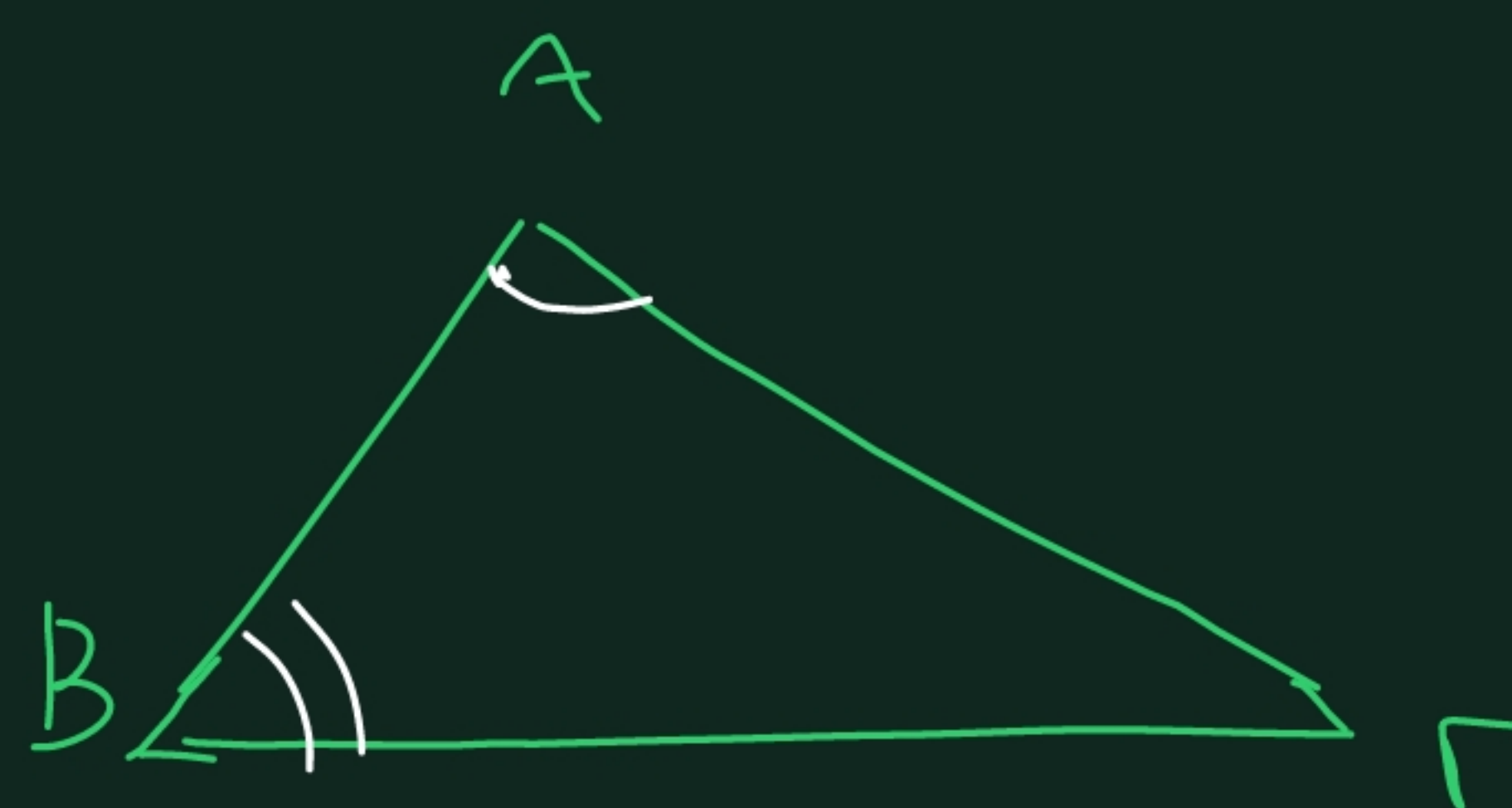
Όμοια Τρίγωνα

Αν 2 τρίγωνα έχουν 2 γωνίες
 ίσες μια προς μια $\xRightarrow{\text{τότε}}$
 είναι όμοια

$$\triangle ABC \sim \triangle \hat{E} \hat{Z}$$

$\hookrightarrow$ όμοια

Απόδ



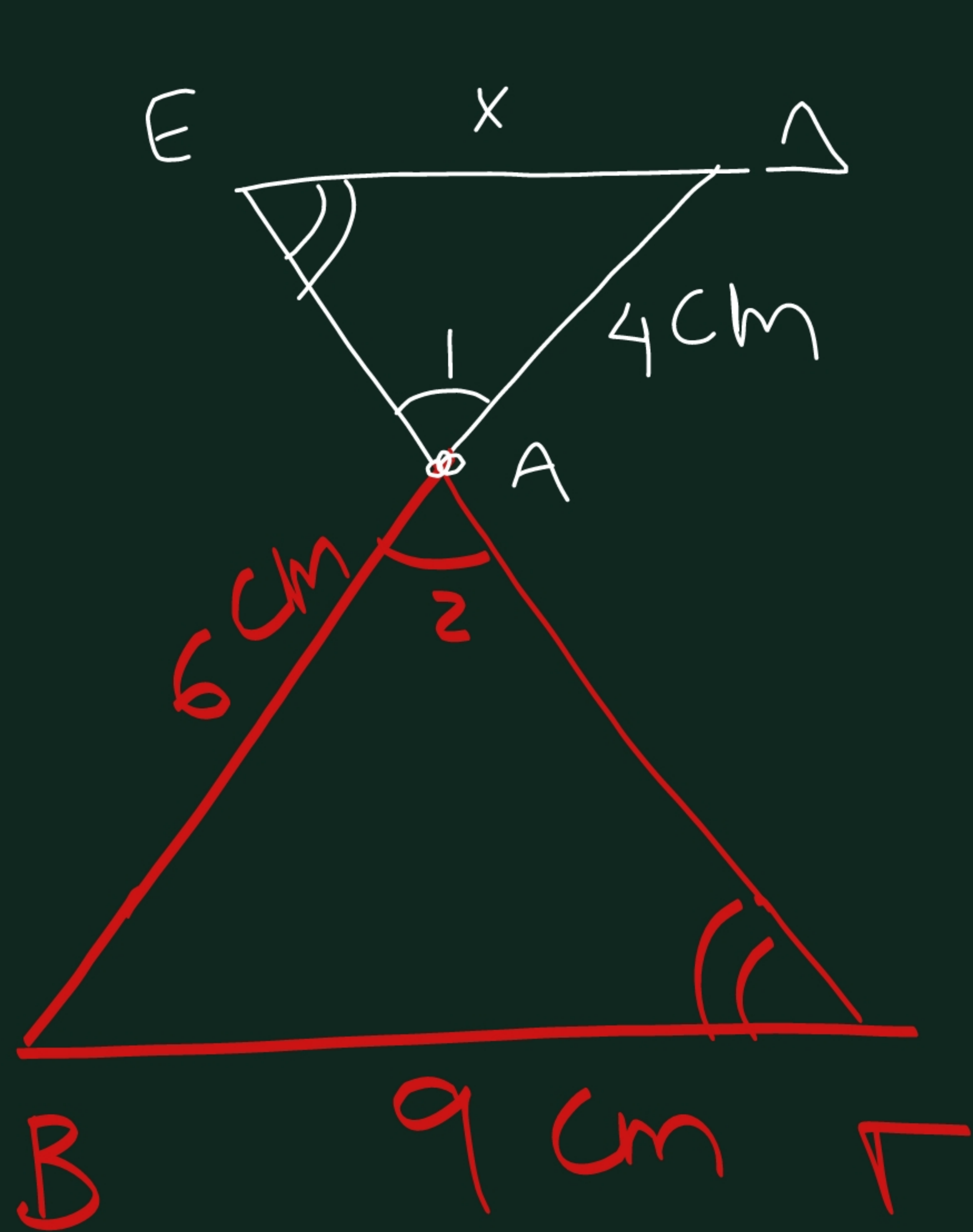
Έχω $\hat{A} = \hat{\Delta}$ (1)
 και $\hat{B} = \hat{E}$ (2)

$$\left. \begin{aligned} \hat{A} + \hat{B} + \hat{\Gamma} &= 180^\circ \\ \hat{\Delta} + \hat{E} + \hat{Z} &= 180^\circ \end{aligned} \right\} \Rightarrow$$

$$\cancel{\hat{A} + \hat{B} + \hat{\Gamma}} = \cancel{\hat{\Delta} + \hat{E}} + \hat{Z} \xRightarrow{\substack{\hat{A} = \hat{\Delta} \\ \hat{B} = \hat{E}}} \hat{\Gamma} = \hat{Z} \quad (3)$$

Από (1), (2), (3) $\Rightarrow$
 $\triangle ABC \sim \triangle \hat{E} \hat{Z}$

1) a)
σ. 222



$$\hat{E} = \hat{\Gamma}$$

Εξω $\hat{A}_1 = \hat{A}_2$ ως
κατα κορυφών

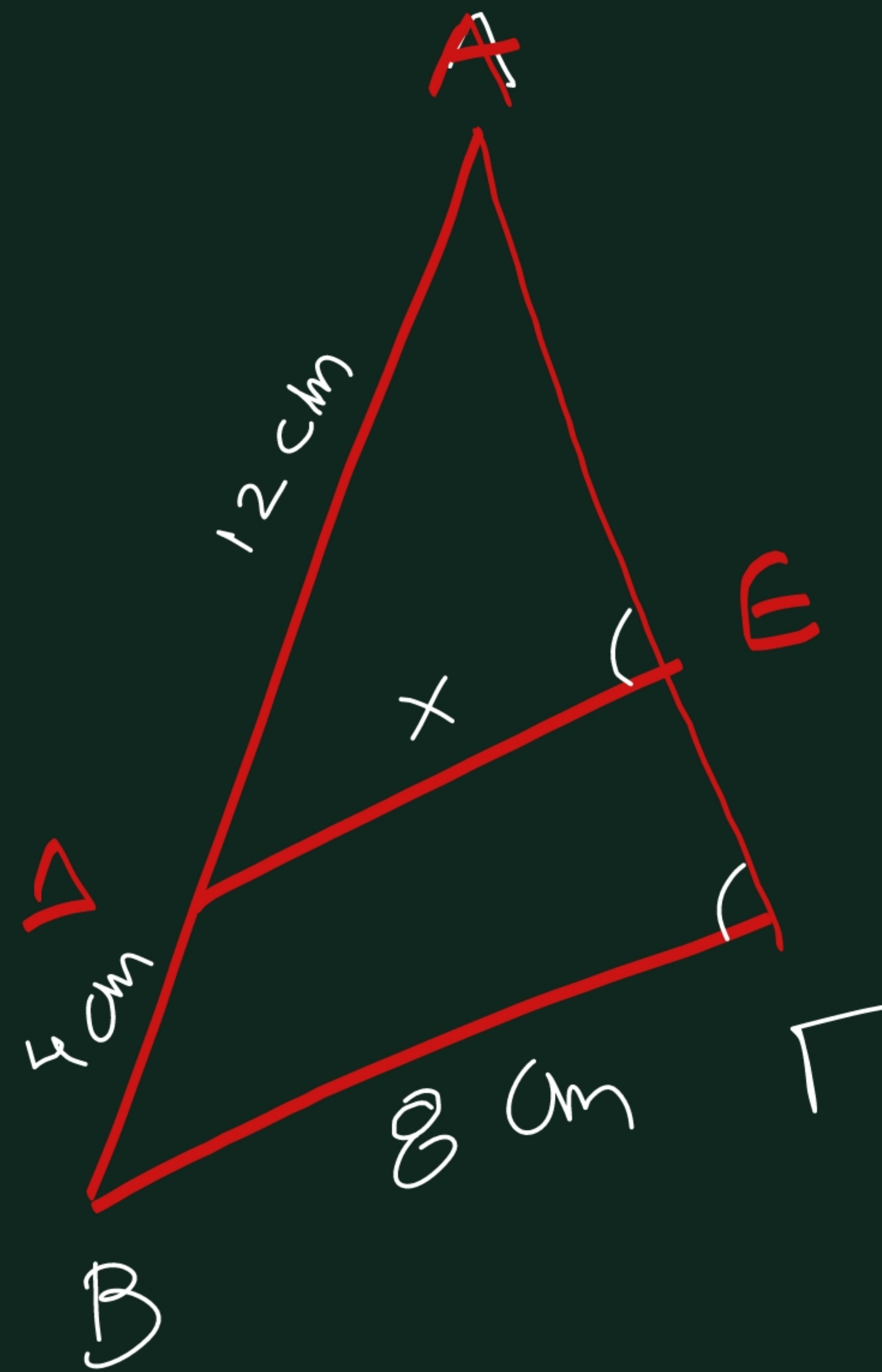
$$\triangle ABE \sim \triangle A\Gamma E \Rightarrow$$

$$\frac{AB}{A\Gamma} = \frac{BE}{\Gamma E} = \frac{AE}{AE} \Rightarrow$$

$$\frac{6}{4} = \frac{9}{x} \Rightarrow \frac{6x}{6} = \frac{36}{6} (=6)$$

$$x = 6$$

1) 8)
 5. 222



$$\frac{AD}{AB} = \frac{DE}{BC} = \frac{AE}{AC} \Rightarrow$$

$$\frac{12}{12+4} = \frac{x}{8} = \frac{AE}{AC} \Rightarrow$$

$$\frac{12}{16} = \frac{x}{8} \Rightarrow \frac{16x}{16} = \frac{12 \cdot 8}{16} \Rightarrow$$

$$\left. \begin{array}{l} \hat{\Gamma} = \hat{E} \\ A \text{ "olvn"} \end{array} \right\} \Rightarrow A \hat{\Delta} E \sim A \hat{B} \Gamma \Rightarrow$$

$$x = 6$$

3)
σ. 223

α) στα $\triangle A\hat{D}E$ και $\triangle A\hat{B}C$

Εχω $\frac{AD}{AE} = \left(\frac{2}{3}\right)$

και $\frac{DB}{EC} = \frac{8-2}{12-3} = \frac{6}{9} = \frac{2}{3}$

Υ	$\triangle A\hat{B}C$ ορθ
	$AC=12, AB=8$
	$AE=3, AD=2$
Σ	α) ΝΑΙ $DE \parallel BC$
	β) ΝΑΙ $\triangle A\hat{D}E \sim \triangle A\hat{B}C$

$$\frac{AD}{AE} = \frac{DB}{EC} \xrightarrow{\text{θ. θαλμ}} \boxed{DE \parallel BC}$$

β) Εχω $DE \parallel BC$ και AB τέμνουντα $\Rightarrow$
 $\hat{A}_1 = \hat{B}_1$ ως εντός εκτός και επί τα αυτά
 και $\hat{A}$ κοινή $\Rightarrow \boxed{\triangle A\hat{D}E \sim \triangle A\hat{B}C}$

