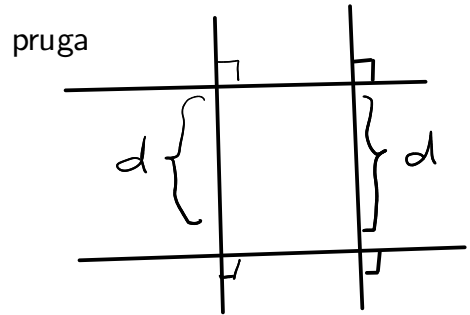
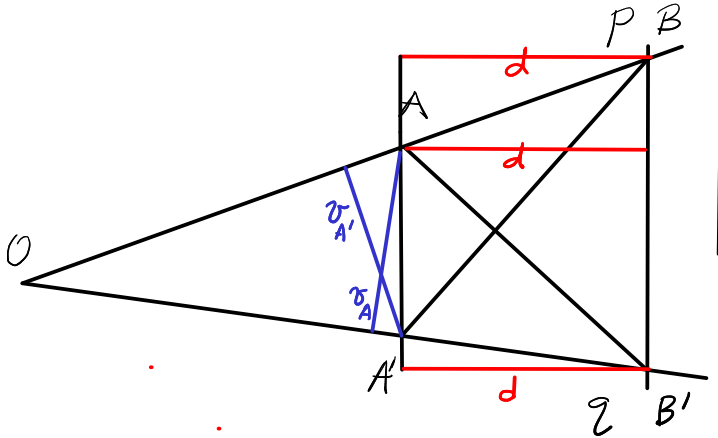


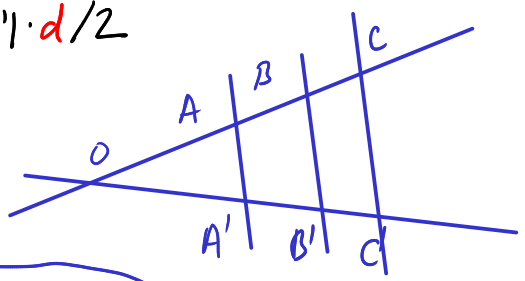
Dokaz Talesovog teorema o proporcionalnosti



$\triangle OAA'B$ $\triangle OAB'$
 " "
 $\triangle OAA' \cup \triangle AA'B'$ $\triangle OAA' \cup \triangle AA'B$
 $P = |\overline{AA'}| \cdot d / 2$ $P = |\overline{AA'}| \cdot d / 2$

$P_{\triangle OAA'} = |\overline{OA}| \cdot v_A / 2$
 $P_{\triangle OAA'} = |\overline{OA'}| \cdot v_{A'} / 2$
 $P_{\triangle OAB} = |\overline{OB}| \cdot v_A / 2$
 $P_{\triangle OAB'} = |\overline{OB'}| \cdot v_{A'} / 2$

$\frac{|\overline{OA}|}{|\overline{OB}|} = \frac{|\overline{OA'}|}{|\overline{OB'}|}$



$\frac{|\overline{AB}|}{|\overline{AC}|} = \frac{(|\overline{OB}| - |\overline{OA}|) / |\overline{OC}|}{(|\overline{OC}| - |\overline{OA}|) / |\overline{OC}|}$
 $= \frac{(|\overline{OB'}| - |\overline{OA'}|) / |\overline{OC}|}{(|\overline{OC'}| - |\overline{OA'}|) / |\overline{OC}|} = \frac{|\overline{A'B'}|}{|\overline{A'C'}|}$

Korolar. Homotetija je preslikavanje sličnosti (to znamo, ali tek sad smo dokazali)

$h_{O,\lambda}: M^2 \rightarrow M^2$

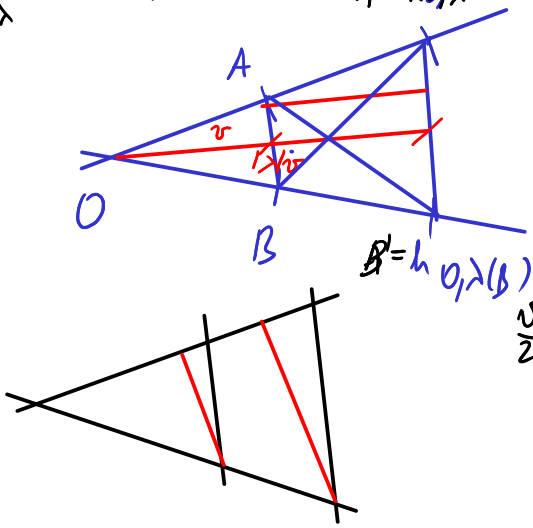
$A' = h_{O,\lambda}(A)$

$d(O, h_{O,\lambda}(A)) = |\lambda| d(O, A)$

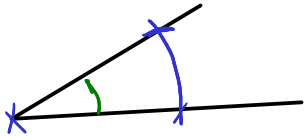
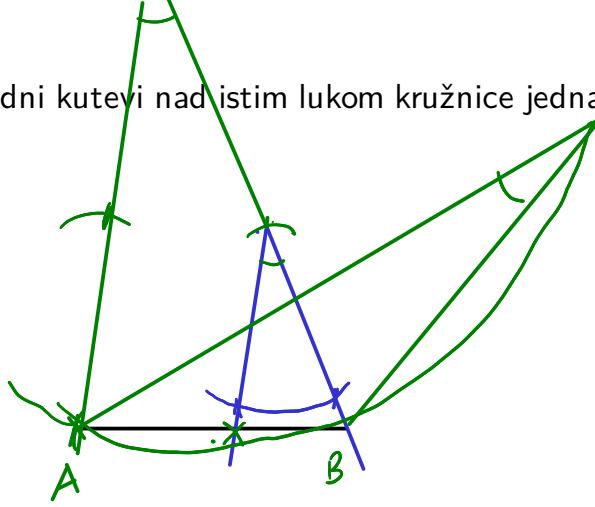
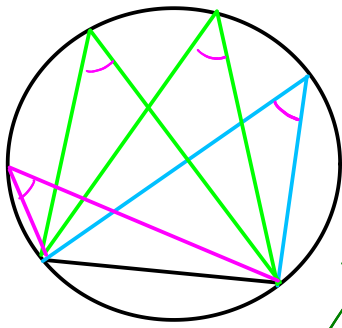
$\Rightarrow d(h_{O,\lambda}(A), h_{O,\lambda}(B)) = |\lambda| d(A, B)$

$P_{\triangle OA'B'} = \lambda^2 P_{\triangle OAB}$

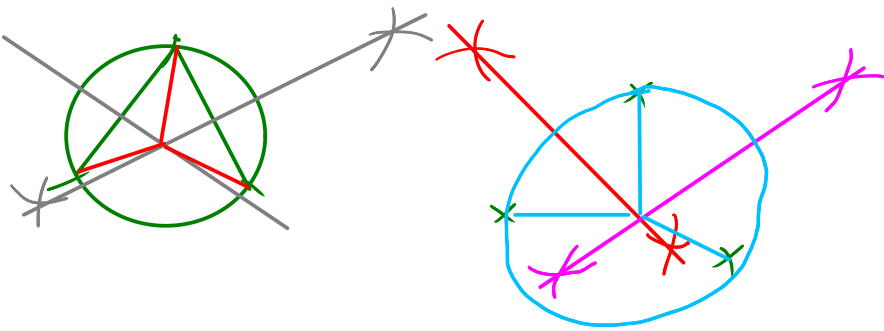
$\frac{\lambda^2 |\overline{AB}|}{2} \cdot |\overline{A'B'}| \Rightarrow |\overline{A'B'}| = \lambda |\overline{AB}|$



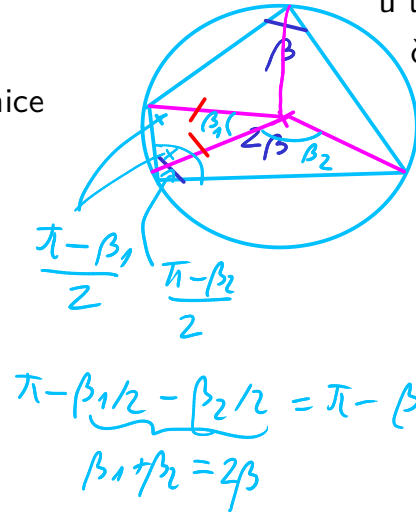
svi su obodni kutevi nad istim lukom kružnice jednaki



Konstrukcija središta dane kružnice, ili od 3 točke s kružnice

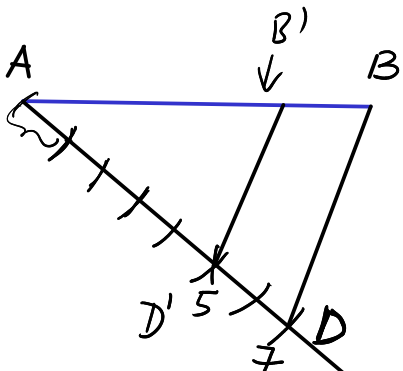


Nasuprotni kutevi u tetivnom četverokutu su suplementarni



$$\frac{\pi - \beta_1}{2} + \frac{\pi - \beta_2}{2} = \pi - \beta$$

$$\beta_1 + \beta_2 = 2\beta$$

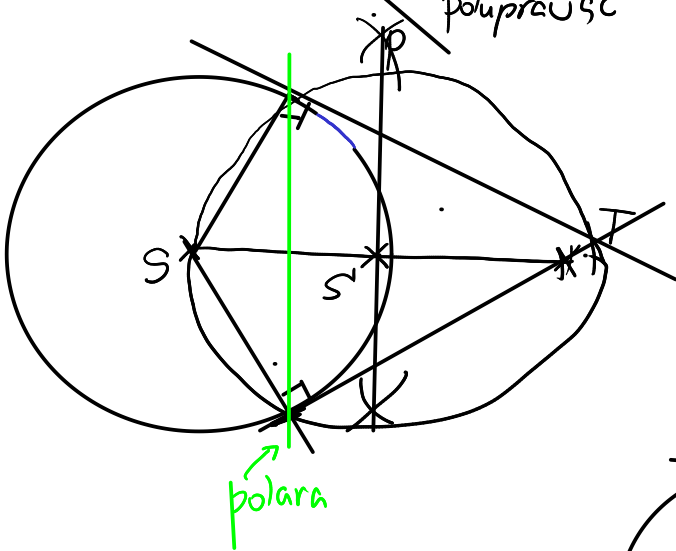
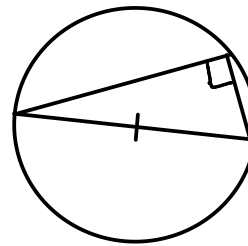


$$\frac{5}{7} \overline{AB}$$

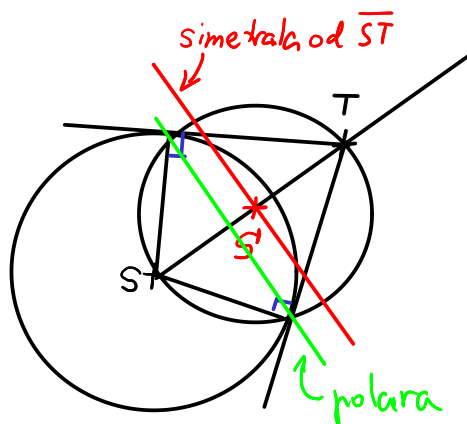
$$\frac{\overline{AD'}}{\overline{AD}} = \frac{5}{7} = \frac{\overline{AB}}{\overline{AB}}$$

polupravac

Talesov teorem o obodnom kutu nad promjerom: svaki obodni kut nad promjerom kružnice je pravi kut



polara



simetrala od ST

polara