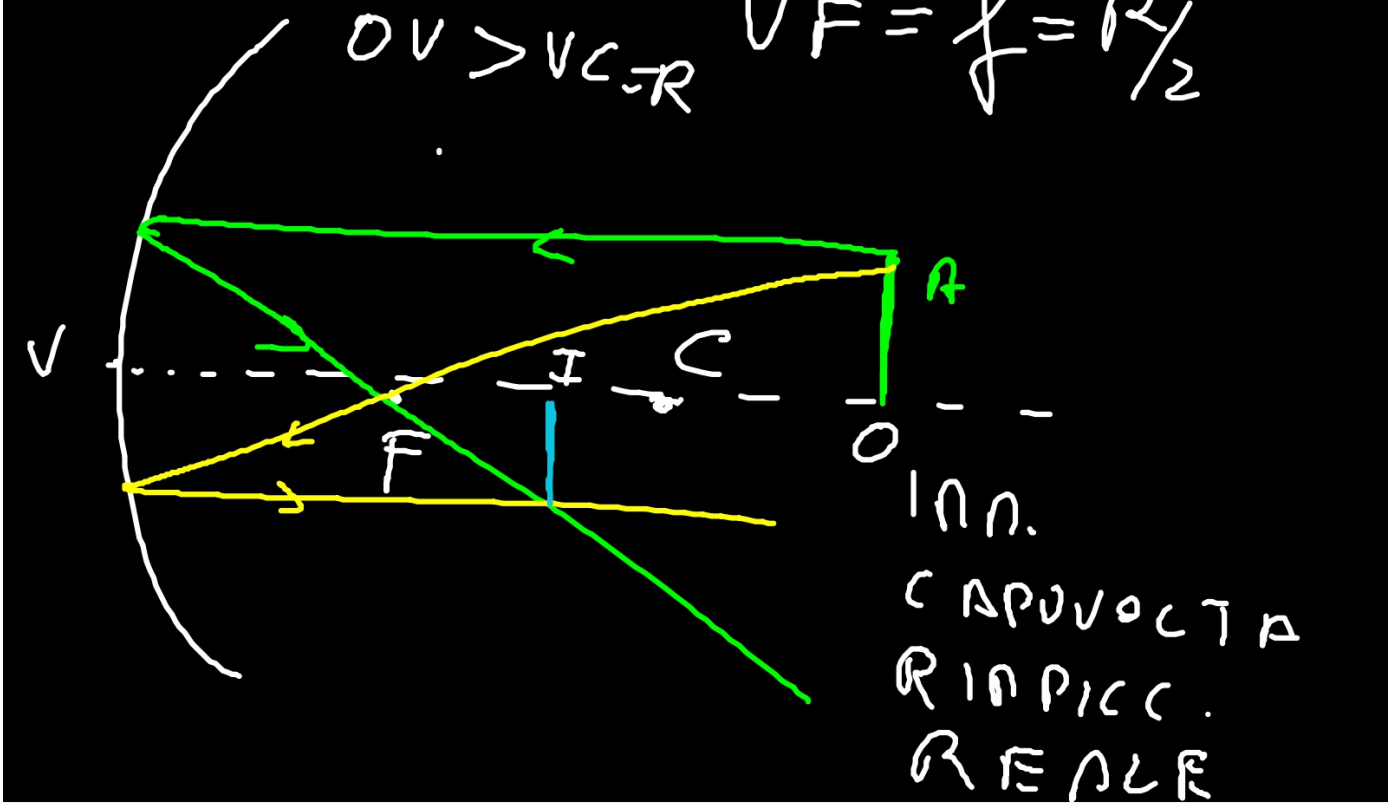
FORMAZIONE DELLE

IMMAGINI PER

SPECCHI CURVI

SP. SFERICO CONCAVO

$\overline{OV} > VC = R$ $\quad VF = f = R/2$



IMM.
CAPOVOLTA
RIMPICC.
REALE

$f < OV < R$

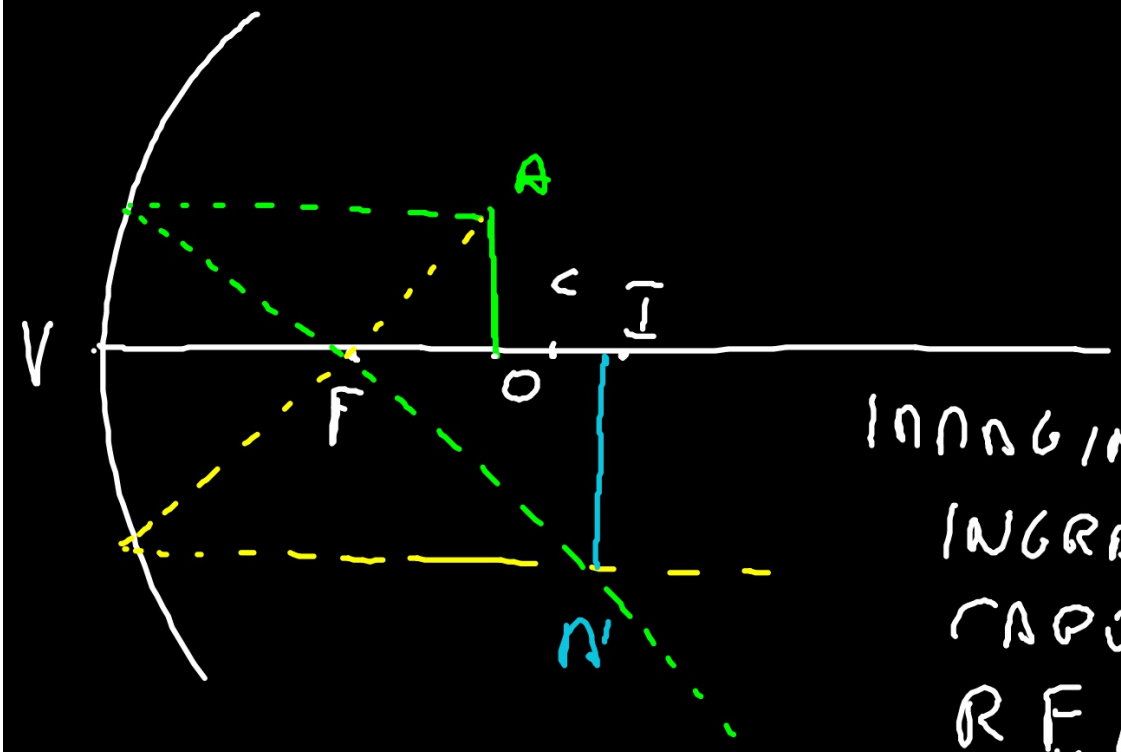
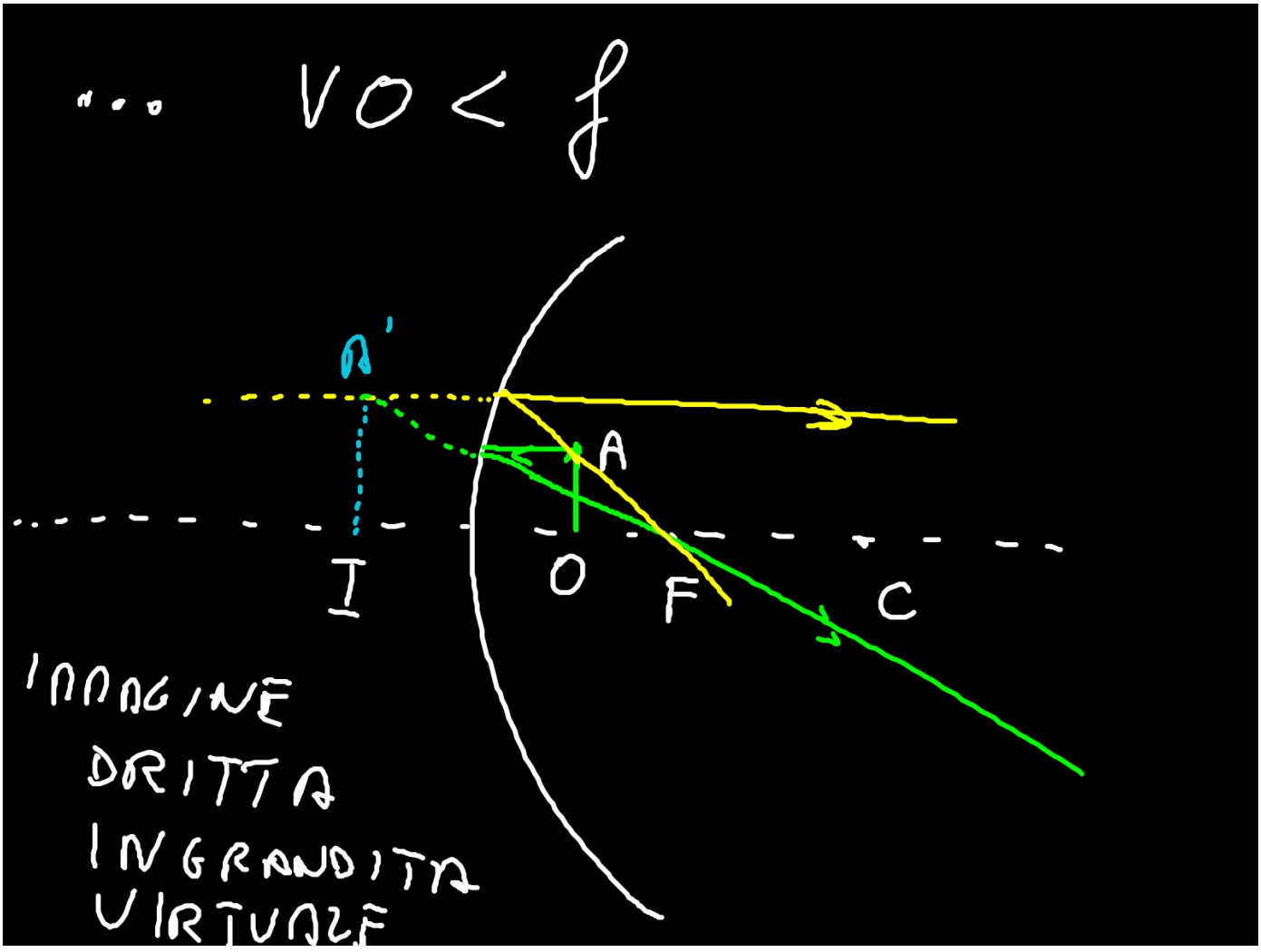
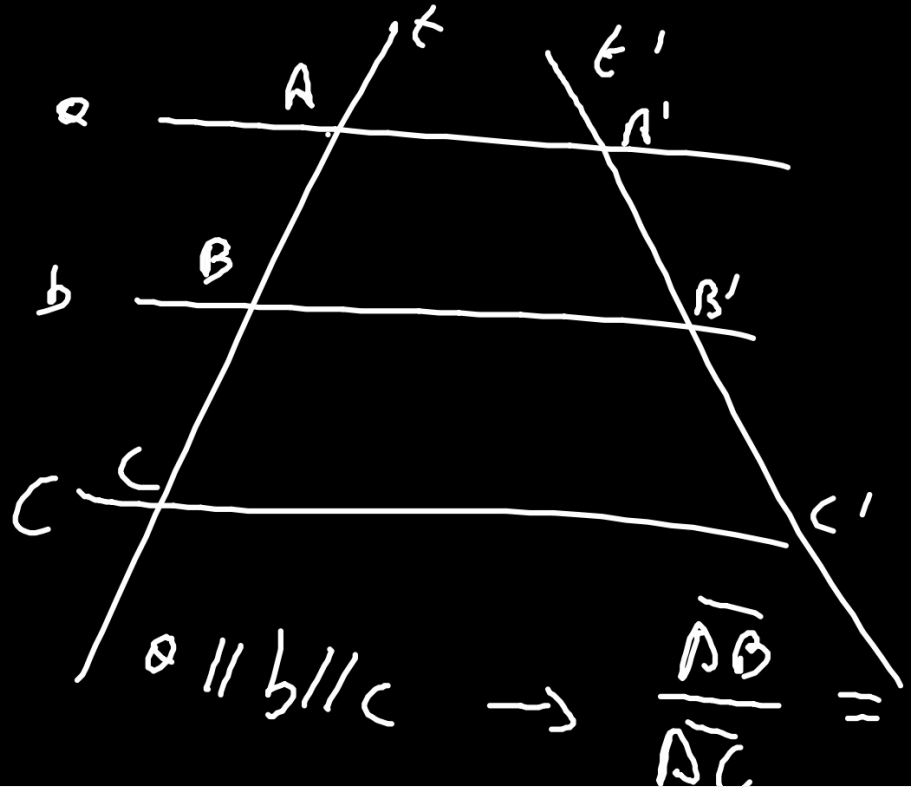


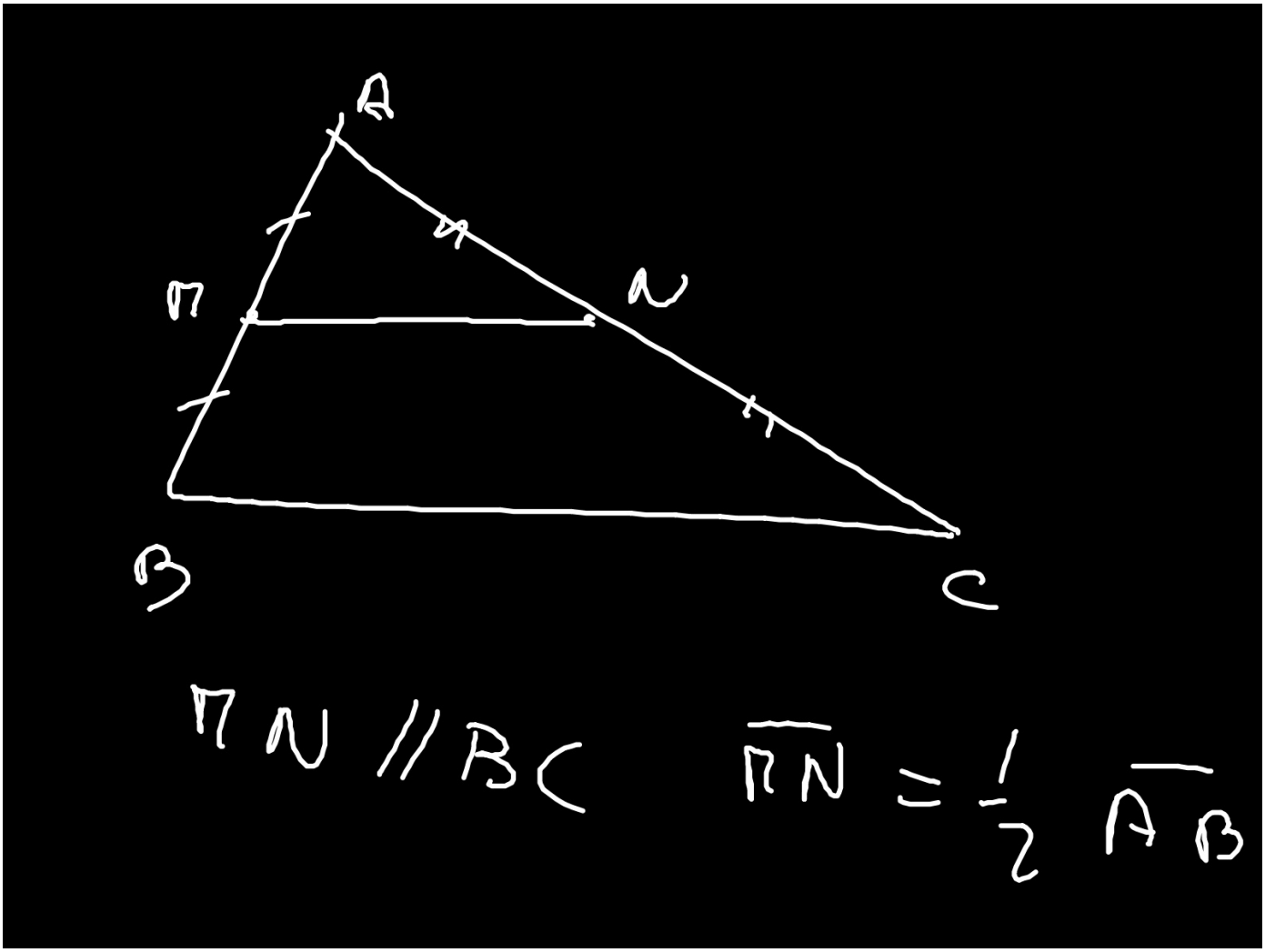
IMMAGINE
INGRANDITA
CAPOVOLTA
REALE

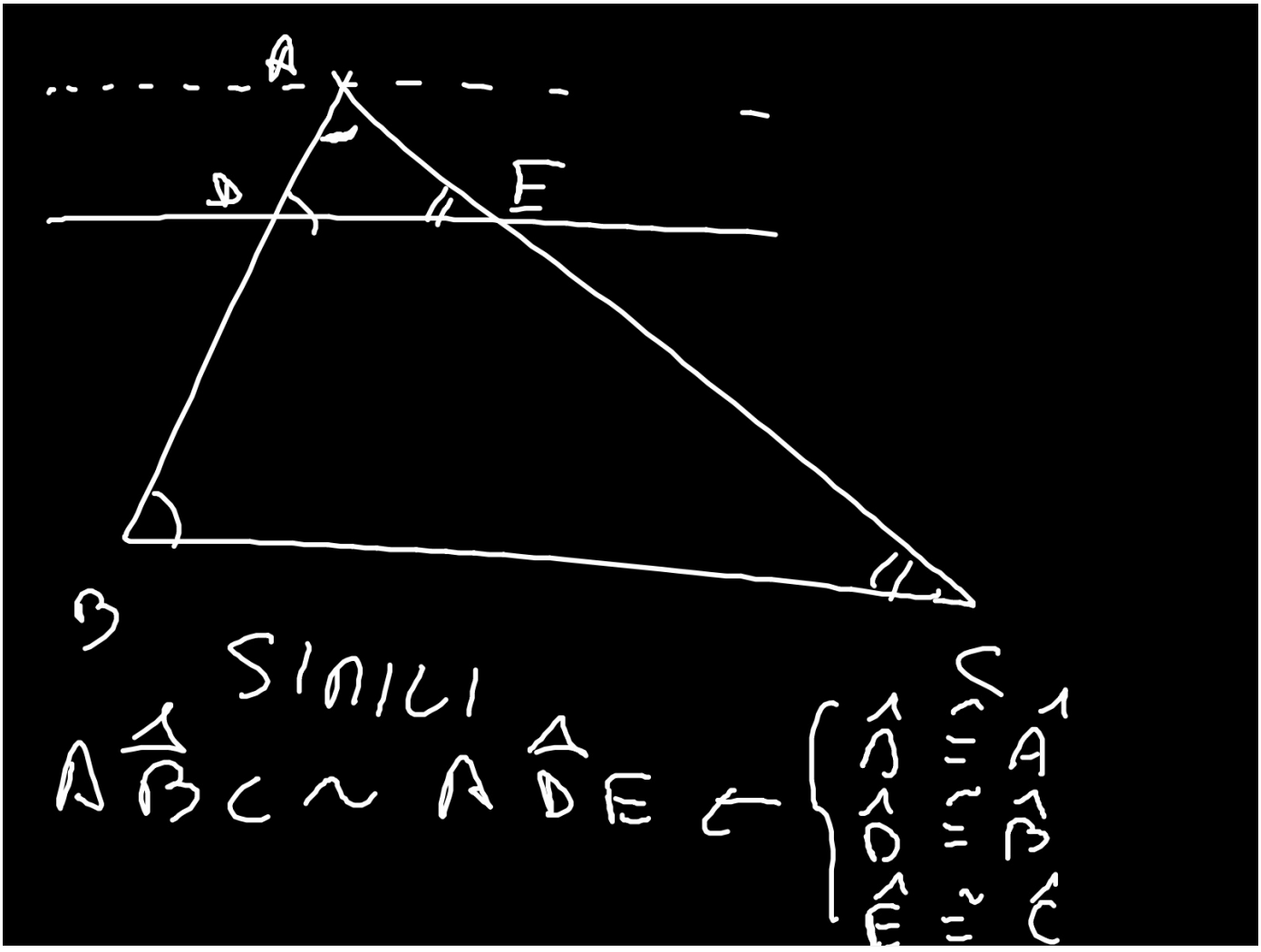

... VO < f
A'
A
I
O
F
C
IMMAGINE
DRITTA
INGRANDITA
VIRTUALE

T. DI TALETE



$a \parallel b \parallel c \rightarrow \frac{\overline{AB}}{\overline{BC}} = \frac{\overline{A'B'}}{\overline{B'C'}}$


A
M
N
B
C
MN // BC
$\overline{MN} = \frac{1}{2}\overline{AB}$



3 SIMILI

$\triangle ABC \sim \triangle ADE$ ⟵

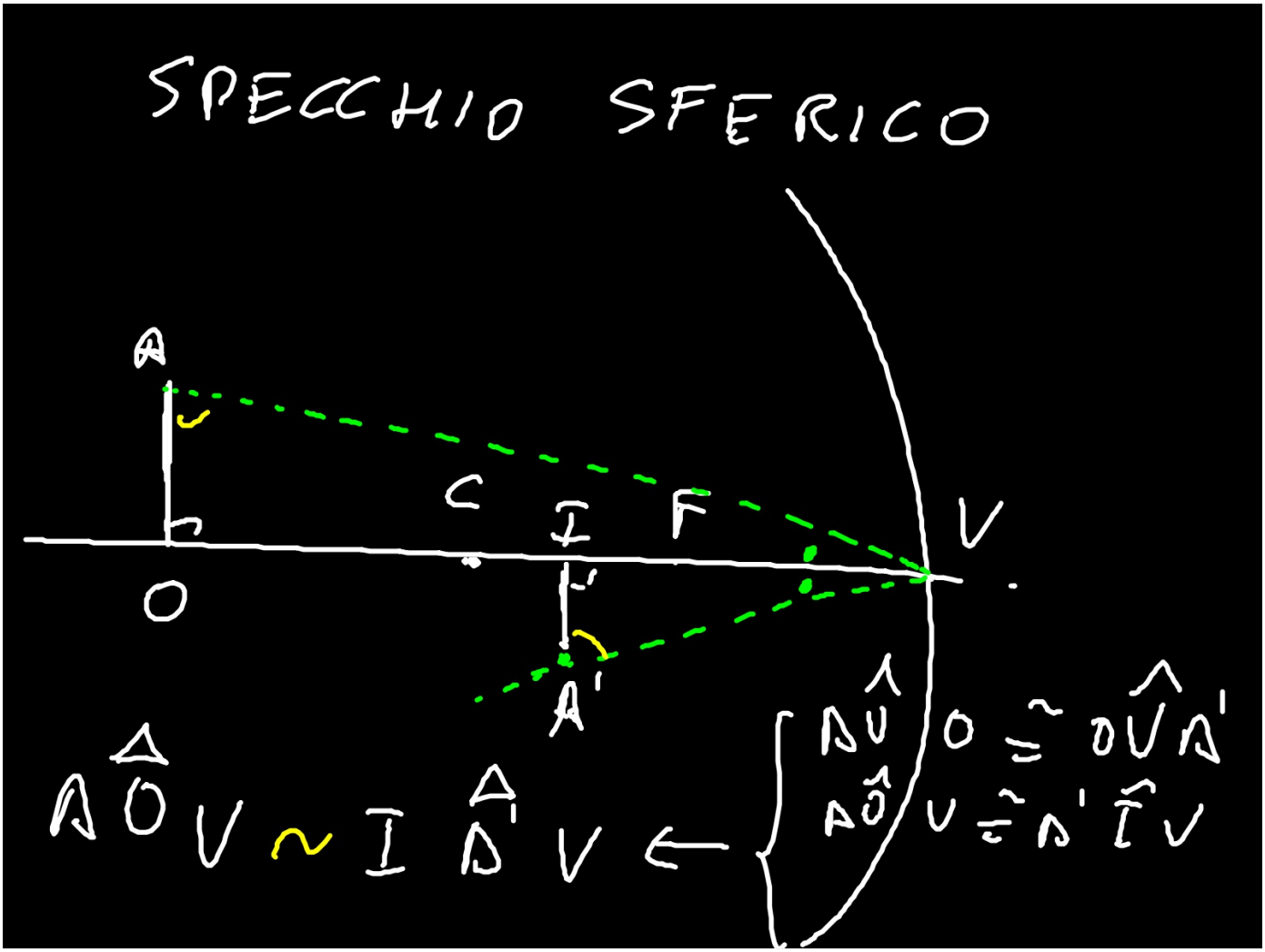
$\hat{C} \cong \hat{A}$

$\hat{A} \cong \hat{B}$

$\hat{D} \cong \hat{B}$

$\hat{E} \cong \hat{C}$

SPECCHIO SFERICO



$A\hat{O}V \sim A'\hat{O}V$

$\Downarrow$

$\frac{\overline{AO}}{\overline{OV}} = \frac{\overline{IA'}}{\overline{IV}}$

$\Downarrow$

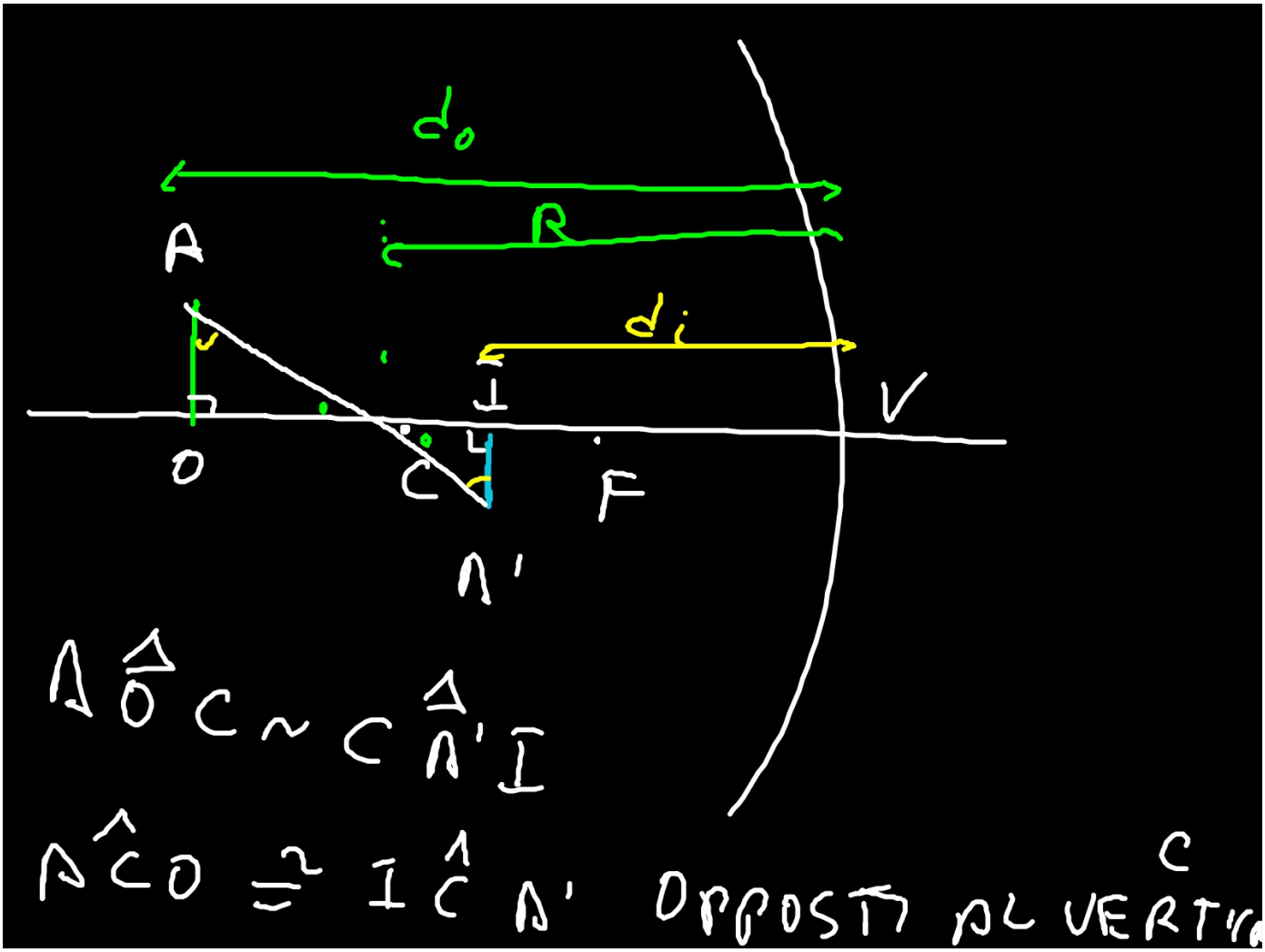
$\frac{h_o}{d_o} = \frac{-h_i}{d_i}$

$h_o > 0$

$h_i < 0$

$d_o = OV$

$d_i = VI$


d_o
A
R
d_i
V
O
C
F
A'
$A\hat{O}C \sim C\hat{A}'I$
$A\hat{C}O \cong I\hat{C}A'$ OPPOSTI AL VERTICE

$$\triangle AOC \sim \triangle CIA'$$

$$\frac{\overline{AO}}{\overline{OC}} = \frac{\overline{IA'}}{\overline{IC}}$$

$$\overline{CO} = d_o - R$$

$$\overline{IC} = R - d_i$$

$$\frac{h_o}{d_o - R} = \frac{-h_i}{R - d_i}$$

$$\begin{cases} \dfrac{h_o}{d_o - R} = \dfrac{-h_i}{R - d_i} \\ \dfrac{h_o}{d_o} = \dfrac{-h_i}{d_i} \end{cases}$$

$$\begin{cases} -\dfrac{h_o}{h_i} = \dfrac{d_o - R}{R - d_i} \\ -\dfrac{h_o}{h_i} = \dfrac{d_o}{d_i} \end{cases}$$

$$\frac{d_o}{d_i} = \frac{d_o - R}{R - d_i}$$

$$\frac{d_o}{d_i} = \frac{d_o\left(1 - \frac{R}{d_o}\right)}{d_i\left(\frac{R}{d_i} - 1\right)}$$

$$1 = \frac{1 - \frac{R}{d_o}}{\frac{R}{d_i} - 1}$$

$$\frac{R}{d_i} - 1 = 1 - \frac{R}{d_o}$$

$$\frac{R}{d_i} + \frac{R}{d_o} = 2$$

$$\frac{1}{d_i} + \frac{1}{d_o} = \frac{2}{R} = \frac{1}{f}$$

$$R/2 = f$$

$$\frac{1}{d_i} + \frac{1}{d_o} = \frac{1}{f}$$

EQ. DELLO SPECCHIO

O

DEI PUNTI CONIUGATI