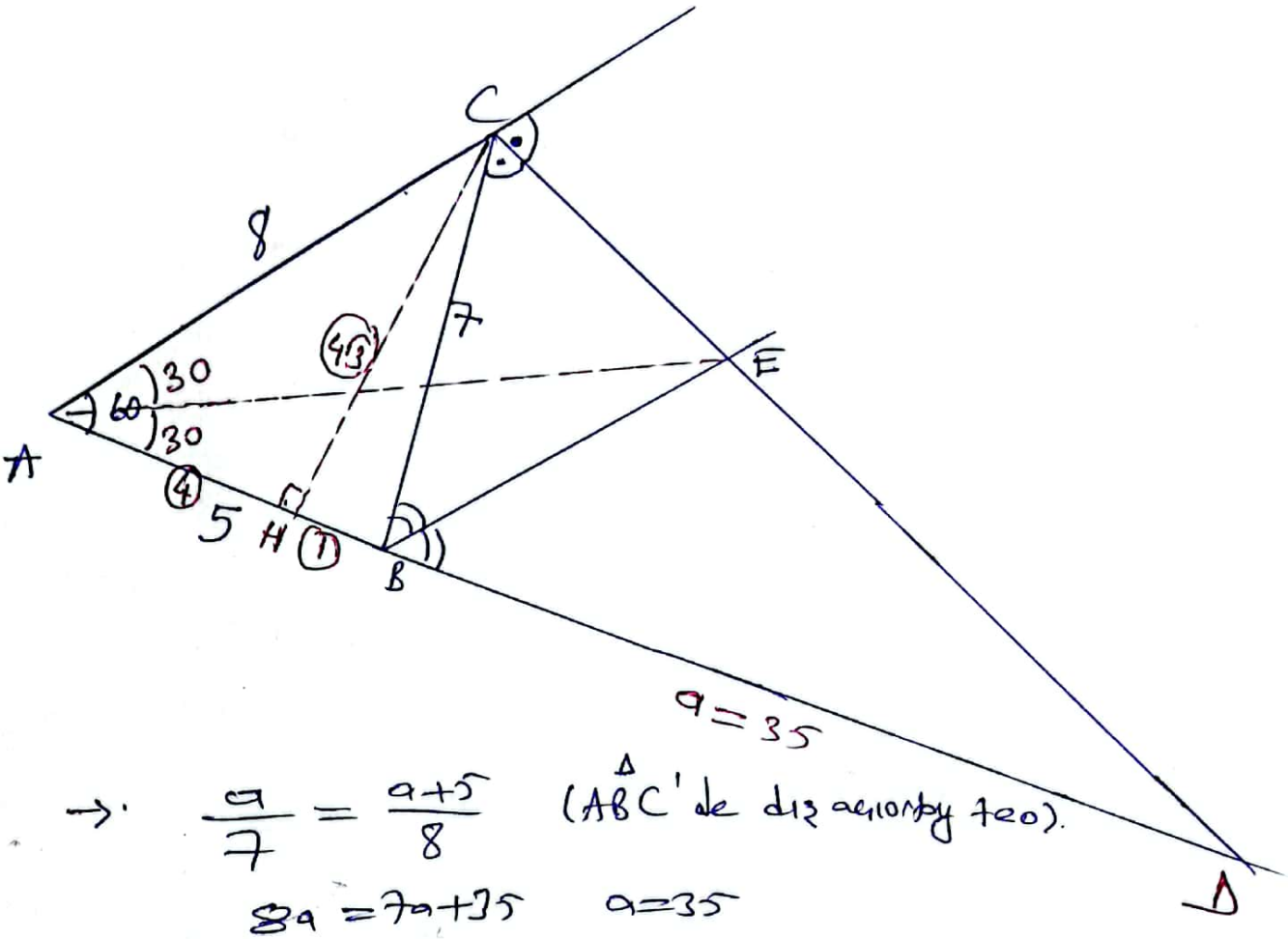

→ $\frac{a}{7} = \frac{a+5}{8}$ ($\hat{ABC}$'de dış açıortay teo).

$8a = 7a + 35 \quad a = 35$

→ $\frac{|CE|}{|ED|} = \frac{8}{40} = \frac{1}{5}$ ($\hat{CAD}$'da iç açıortay teoremi) veya $\hat{CBD}$'de iç açıortay teoremi)

→ $|CD|^2 = |CH|^2 + |HD|^2 = (4\sqrt{3})^2 + 36^2 \Rightarrow |CD| = 8\sqrt{21}$

→ $|CE| = \frac{4\sqrt{21}}{3} \quad |ED| = \frac{20\sqrt{21}}{3}$

→ $\hat{CBE}$ de iç açıortay uzunluğu

$|BE|^2 = 7 \cdot 35 - \frac{4\sqrt{21}}{3} \cdot \frac{20\sqrt{21}}{3}$

$|BE|^2 = \frac{5^2 \cdot 7}{3} \Rightarrow |BE| = \frac{5\sqrt{21}}{3}$

$\frac{|BE|}{|EA|} = \frac{\frac{5\sqrt{21}}{3}}{\frac{20\sqrt{21}}{3}} = \frac{1}{4}$