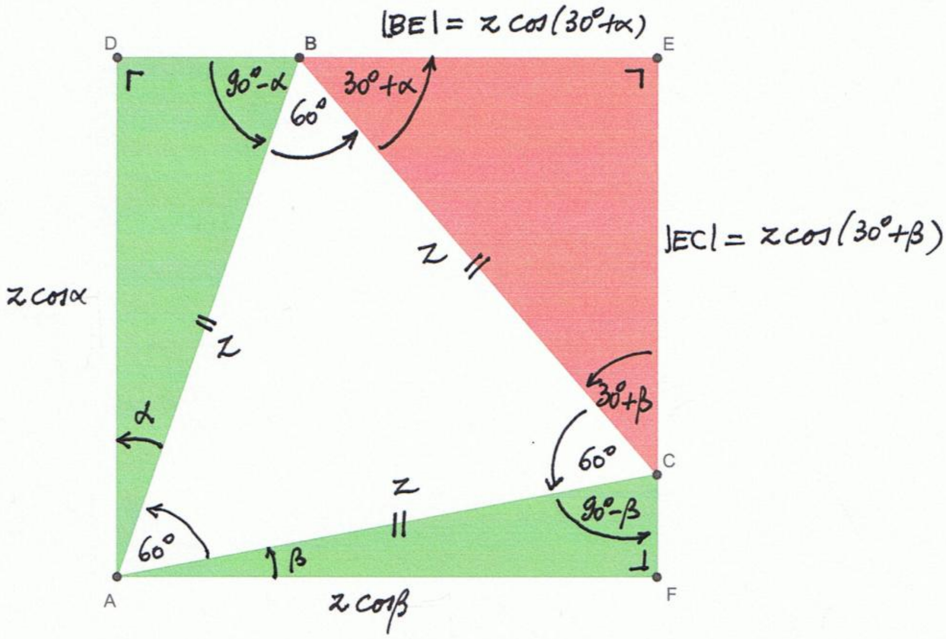
Om een gelijkzijdige driehoek ABC tekent men een rechthoek ADEF zoals op de figuur.
Op die manier ontstaan de rechthoekige driehoeken CFA, ADB en BEC.
Dan is opp. Δ CFA + opp. Δ ADB = opp. Δ BEC.



Bewijs.

$$\text{Opp. } \Delta CFA = \frac{1}{2} \cdot z \cdot z\cos\beta \cdot \sin\beta$$
$$\text{Opp. } \Delta ADB = \frac{1}{2} \cdot z \cdot z\cos\alpha \cdot \sin\alpha$$

$$\begin{aligned}
\text{Opp. } \Delta CFA + \text{Opp. } \Delta ADB &= \frac{z^2}{2}\left(\sin\alpha\cos\alpha + \sin\beta\cos\beta\right) \\
&= \frac{z^2}{4}\left(\sin 2\alpha + \sin 2\beta\right) \\
&= \frac{z^2}{2} \cdot \sin(\alpha+\beta) \cdot \cos(\alpha-\beta) \\
&\overset{\alpha+\beta=30^\circ}{=} \frac{z^2}{4} \cos(\alpha-\beta).
\end{aligned}$$

$$\begin{aligned}
\text{Opp. } \Delta BEC &= \frac{1}{2} \cdot z^2 \cos(30^\circ+\alpha)\cos(30^\circ+\beta) \\
&= \frac{z^2}{2} \cdot \frac{1}{2}\left[\cos(60^\circ+\alpha+\beta) + \cos(30^\circ+\alpha-30^\circ-\beta)\right] \\
&= \frac{z^2}{4}\left[\cos(60^\circ+\alpha+\beta) + \cos(\alpha-\beta)\right] \\
&\overset{\alpha+\beta=30^\circ}{=} \frac{z^2}{4}\left[\cos 90^\circ + \cos(\alpha-\beta)\right] \\
&= \frac{z^2}{4}\cos(\alpha-\beta)
\end{aligned}$$

Q.E.D.