

$$\begin{aligned}
 z_1 &= (\sqrt{3}-i)^{10} = (2\text{cis}(-30))^{10} = 2^{10}\text{cis}(-300) = 2^{10}\text{cis}60 \\
 z_2 &= (\sqrt{3}+i)^{10} = (2\text{cis}30)^{10} = 2^{10}\text{cis}(300) = 2^{10}\text{cis}(-60) \\
 z_1+z_2 &= 2^{10}(\text{cis}60 + \text{cis}(-60)) = 2^{10}(\cos 60 + i\sin 60 + \cos(-60) + i\sin(-60)) = \\
 &= 2^{10} \\
 z_1 \cdot z_2 &= 2^{10}\text{cis}60 \cdot 2^{10}\text{cis}(-60) = 2^{20}
 \end{aligned}$$

$z_1 + z_2 = -b$      $z_1 \cdot z_2 = c$     א"ת / אלקואי א"ת  
 $b = -2^{10}$      $c = 2^{20}$     פ"ל

$z_1 = -3 + \sqrt{3}i$     פ"ל    ii

$z_1 = \sqrt{12}\text{cis}150$     מ"ל / מ"ב    א"ת  
 $AO = R = \sqrt{12}$   
 $\angle AOF = 150^\circ$

$(\sqrt{3} \text{ א"ת}) \angle B = 60^\circ \rightarrow \angle AOC = 120^\circ$     א"ת / א"ת  
 (א"ת / א"ת) א"ת / א"ת א"ת / א"ת

$\angle AOB = 2\angle C = 120$

$\Rightarrow \angle FOB = \angle FOA + \angle AOB = 270$

$z_2 = R\text{cis}270 = -\sqrt{12}i \rightarrow B(0, -\sqrt{12})$

$\angle COF = \angle AOF - \angle AOC = 150 - 120 = 30$

$z_3 = R\text{cis}30 = \sqrt{12}\text{cis}30 \rightarrow C(3, \sqrt{3})$