

$$61 \quad 81 = 81(\cos 0^\circ + i \sin 0^\circ)$$

$$w_0 = \sqrt[4]{81} \left(\cos \frac{0^\circ + 360^\circ \cdot 0}{4} + i \sin \frac{0^\circ + 360^\circ \cdot 0}{4} \right) = 3(\cos 0^\circ + i \sin 0^\circ) = 3$$

$$w_1 = \sqrt[4]{81} \left(\cos \frac{0^\circ + 360^\circ \cdot 1}{4} + i \sin \frac{0^\circ + 360^\circ \cdot 1}{4} \right) = 3(\cos 90^\circ + i \sin 90^\circ) = 3i$$

$$w_2 = \sqrt[4]{81} \left(\cos \frac{0^\circ + 360^\circ \cdot 2}{4} + i \sin \frac{0^\circ + 360^\circ \cdot 2}{4} \right) = 3(\cos 180^\circ + i \sin 180^\circ) = -3$$

$$w_3 = \sqrt[4]{81} \left(\cos \frac{0^\circ + 360^\circ \cdot 3}{4} + i \sin \frac{0^\circ + 360^\circ \cdot 3}{4} \right) = 3(\cos 270^\circ + i \sin 270^\circ) = -3i$$

This result is verified with the calculator in *Figures 61a* and *61b*.

3^4	81
$(3i)^4$	81

Figure 61a

$(-3)^4$	81
$(-3i)^4$	81

Figure 61b