

Complex Number 5

Given : $(Z - 3)^4 = 16$

Prove that

(a) $Z_1, Z_2, Z_3, Z_4 = 65$

(b) $Z_1 + Z_2 + Z_3 + Z_4 = 6$

Given : $Z = 1+i$

Calculate $Z^4 = ?$

And Find $Z^{10} = ?$

$$Z = \cos 30^\circ + i \sin 30^\circ$$

Find: $Z^2 =$

$$Z^3 = i$$

$$Z^6 =$$

Given $Z^4 = -4$

Find $Z^2 = ?$

Prove that

$$(i+i^2+i^3+i^4) + (i^5+i^6+i^7+i^8) + (i^9+i^{10}+i^{11}+i^{12}) = 0$$