Tutorial

**Introduction to complex Numbers and DeMoivre’s Theorem**

1. Express the complex number in the form of and find its real and imaginary part for the following
2. If and find
3. Find the modulus and argument (amplitude) of each of the following
4. Find two complex numbers whose sum is 4 and whose product is 8.
5. Find the values of and if (Ans: )
6. If then find the value of .
7. If then find .
8. If and then find .
9. If , find
10. Prove that .
11. Find the modulus and the amplitude of (Ans: modulus= 1, amplitude=)
12. Prove that
13. Prove that
14. Express in the form of and hence prove and .