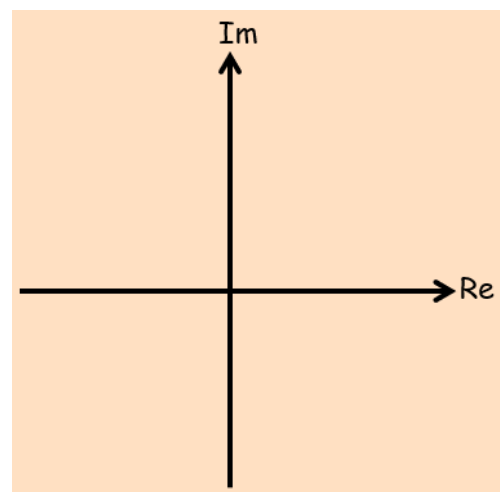


1F nth Roots of Complex Numbers

1.
 - a) Solve the equation $z^3 = 1$ and represent your solutions on an Argand diagram.



b) Show that the three cube roots of 1 can be written as $1 + \omega + \omega^2$ where $1 + \omega + \omega^2 = 0$

Summary notes:

2. Solve the equation $z^4 - 2\sqrt{3}i = 2$

Give your answers in both the modulus-argument and exponential forms.

3. Solve the equation:

$$z^3 + 4\sqrt{2} + 4i\sqrt{2} = 0$$