Q. No.	DAY - 8
38	**EXERCISE 2.3** 3. If $z_1 = 2+5i$, $z_2 = -3-4i$, and $z_3 = 1+i$, find the additive and multiplicative inverse of z_1, z_2, and z_3.
39	**Example 2.4** Simplify $\left(\frac{1+i}{1-i}\right)^3 - \left(\frac{1-i}{1+i}\right)^3$.
40	**Example 2.7** Find z^{-1}, if $z = (2+3i)(1-i)$.
41	**Example 2.8** Show that (i) $\left(2+i\sqrt{3}\right)^{10} + \left(2-i\sqrt{3}\right)^{10}$ is real and (ii) $\left(\frac{19+9i}{5-3i}\right)^{15} - \left(\frac{8+i}{1+2i}\right)^{15}$ is purely imaginary.
42	**EXERCISE 2.4** 2. If $z = x+iy$, find the following in rectangular form. (i) $\mathrm{Re}\left(\frac{1}{z}\right)$ (ii) $\mathrm{Re}(i\bar{z})$ (iii) $\mathrm{Im}(3z+4\bar{z}-4i)$

43	4. The complex numbers u, v, and w are related by $\frac{1}{u} = \frac{1}{v} + \frac{1}{w}$ If $v = 3 - 4i$ and $w = 4 + 3i$, find u in rectangular form.