

If the cube roots of unity are $1, w, w^2$ then the roots of the equation $(x - 1)^3 + 8 = 0$ are

A $-1, -1 + 2w, -1 - 2w^2$

B $-1, -1, -1$

C $-1, 1 - 2w, 1 - 2w^2$

D $-1, 1 + 2w, 1 + 2w^2$

Correct option is C)

The roots of the equation $(x - 1)^3 + 8 = 0 \Rightarrow (x - 1) = (-2)(1)^{1/3}$

$\Rightarrow x - 1 = -2$ or $-2\omega^2$ or -2ω

$\Rightarrow x = -1$ or $1 - 2\omega^2$ or $1 - 2\omega$