

12.281

EE25BTECH11060 - V.Namaswi

Question

A is a 2×2 matrix with $\det \mathbf{A} = 2$. Then $\det 2\mathbf{A}$ is

Solution

As

$$\det(kA) = k^n \det(A) \quad (1)$$

Here, $n = 2$ and $k = 2$. Thus,

$$\det(2A) = 2^2 \cdot \det(A) \quad (2)$$

$$= 4 \cdot 2 \quad (3)$$

$$= 8 \quad (4)$$