TOPIC
Mathematics – Section I – Question 18

QUESTION
The determinant of the matrix

$$\begin{bmatrix} 2 & 1 & 3 \\ 4 & 0 & 5 \\ 8 & 9 & 13 \end{bmatrix}$$

most nearly is

    (A) -90
    (B) 16
    (C) 20
    (D) 26

HINT
The determinant of the matrix

$$\begin{bmatrix} a_{11} & a_{13} & a_{13} \\ a_{21} & a_{22} & a_{23} \\ a_{31} & a_{32} & a_{33} \end{bmatrix}$$

is

$$= a_{11} \begin{vmatrix} a_{22} & a_{23} \\ a_{32} & a_{33} \end{vmatrix} - a_{12} \begin{vmatrix} a_{21} & a_{23} \\ a_{31} & a_{33} \end{vmatrix} + a_{13} \begin{vmatrix} a_{21} & a_{22} \\ a_{31} & a_{32} \end{vmatrix}$$

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