



Math worksheet on 'Matrices - Find Determinant Formula (2x2) (Level 1)'. Part of a broader unit on 'Matrices'

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2 Choose the correct formula for the determinant of this matrix

$$|D| = a_{11} \cdot a_{22} - a_{12} \cdot a_{21}$$

$$D = \begin{bmatrix} 2 & 5 \\ 3 & 7 \end{bmatrix}$$

- | | |
|----------------------------------|----------------------------------|
| a $2 \cdot 7 + 5 \cdot 3$ | b $3 \cdot 7 + 7 \cdot 3$ |
| c $2 \cdot 5 - 7 \cdot 3$ | d $7 \cdot 5 + 7 \cdot 3$ |
| e $3 \cdot 5 + 5 \cdot 5$ | f $2 \cdot 7 - 5 \cdot 3$ |

4 Choose the correct formula for the determinant of this matrix

$$|B| = a_{11} \cdot a_{22} - a_{12} \cdot a_{21}$$

$$B = \begin{bmatrix} 9 & 2 \\ 7 & 8 \end{bmatrix}$$

- | | |
|----------------------------------|----------------------------------|
| a $7 \cdot 8 + 2 \cdot 2$ | b $9 \cdot 7 - 2 \cdot 8$ |
| c $9 \cdot 8 - 2 \cdot 7$ | d $9 \cdot 9 + 9 \cdot 2$ |
| e $7 \cdot 9 - 2 \cdot 8$ | f $2 \cdot 9 + 2 \cdot 8$ |

6 Choose the correct formula for the determinant of this matrix

$$|Y| = a_{11} \cdot a_{22} - a_{12} \cdot a_{21}$$

$$Y = \begin{bmatrix} 2 & 0 \\ 7 & 7 \end{bmatrix}$$

- | | |
|----------------------------------|----------------------------------|
| a $2 \cdot 7 + 7 \cdot 0$ | b $2 \cdot 0 - 7 \cdot 0$ |
| c $2 \cdot 0 - 7 \cdot 7$ | d $2 \cdot 7 - 0 \cdot 7$ |
| e $7 \cdot 0 + 2 \cdot 0$ | f $7 \cdot 2 + 7 \cdot 2$ |

1 Choose the correct formula for the determinant of this matrix

$$|N| = a_{11} \cdot a_{22} - a_{12} \cdot a_{21}$$

$$N = \begin{bmatrix} 7 & 2 \\ 2 & 2 \end{bmatrix}$$

- | | |
|----------------------------------|----------------------------------|
| a $2 \cdot 2 - 2 \cdot 2$ | b $7 \cdot 2 + 2 \cdot 7$ |
| c $7 \cdot 2 - 7 \cdot 2$ | d $2 \cdot 2 + 2 \cdot 2$ |
| e $7 \cdot 2 + 2 \cdot 2$ | f $7 \cdot 2 - 2 \cdot 2$ |

3 Choose the correct formula for the determinant of this matrix

$$|Y| = a_{11} \cdot a_{22} - a_{12} \cdot a_{21}$$

$$Y = \begin{bmatrix} 1 & 8 \\ 1 & 7 \end{bmatrix}$$

- | | |
|----------------------------------|----------------------------------|
| a $1 \cdot 7 - 8 \cdot 1$ | b $1 \cdot 8 - 1 \cdot 7$ |
| c $1 \cdot 1 + 7 \cdot 8$ | d $1 \cdot 1 + 8 \cdot 1$ |
| e $1 \cdot 7 + 8 \cdot 1$ | f $8 \cdot 1 + 1 \cdot 1$ |

5 Choose the correct formula for the determinant of this matrix

$$|C| = a_{11} \cdot a_{22} - a_{12} \cdot a_{21}$$

$$C = \begin{bmatrix} 4 & 3 \\ 7 & 5 \end{bmatrix}$$

- | | |
|----------------------------------|----------------------------------|
| a $3 \cdot 5 - 5 \cdot 4$ | b $4 \cdot 5 - 3 \cdot 7$ |
| c $3 \cdot 7 - 5 \cdot 5$ | d $4 \cdot 5 + 4 \cdot 7$ |
| e $4 \cdot 3 - 5 \cdot 7$ | f $4 \cdot 5 + 3 \cdot 7$ |

7 Choose the correct formula for the determinant of this matrix

$$|X| = a_{11} \cdot a_{22} - a_{12} \cdot a_{21}$$

$$X = \begin{bmatrix} 1 & 9 \\ 9 & 9 \end{bmatrix}$$

- | | |
|----------------------------------|----------------------------------|
| a $9 \cdot 9 - 9 \cdot 1$ | b $1 \cdot 9 - 1 \cdot 9$ |
| c $1 \cdot 9 + 9 \cdot 1$ | d $1 \cdot 9 - 9 \cdot 9$ |
| e $9 \cdot 9 + 9 \cdot 9$ | f $9 \cdot 9 + 9 \cdot 1$ |