Name

Interpret the determinant as a test of invertibility

1 Which shows how to calculate the determinant of this matrix?

$$\begin{bmatrix} -8 & -3 \\ 3 & -2 \end{bmatrix}$$

A	$(-8 \cdot -3) - (3 \cdot -2)$
B	$(-3 \cdot 3) - (-8 \cdot -2)$
C	$(-8 \cdot -2) - (-3 \cdot 3)$

2 What is the determinant of this matrix?

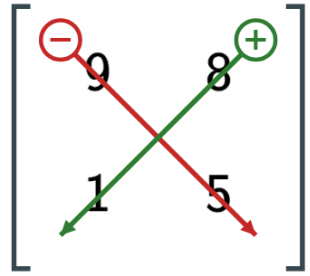
$$\begin{bmatrix} 7 & -5 & 2 \\ 0 & -9 & -5 \\ -9 & 6 & 4 \end{bmatrix}$$

A	-434	B	-425	C	-427
D	-428	E	-424	F	-429

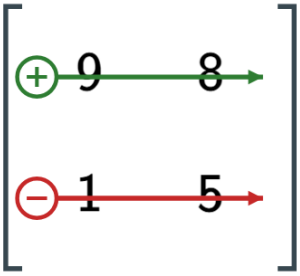
3 Which diagram shows how to multiply the values to find the determinant? Green is the product that is added, red is subtracted.

$$\begin{bmatrix} 9 & 8 \\ 1 & 5 \end{bmatrix}$$

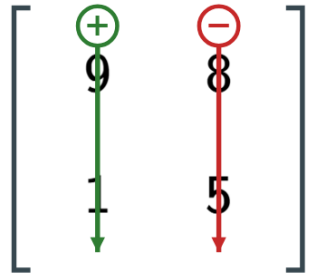
A



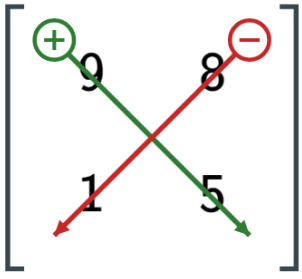
B



C



D



4 What is the determinant of this matrix?

$$\begin{bmatrix} 0 & 9 & 7 \\ 8 & 8 & -5 \\ -1 & -9 & 8 \end{bmatrix}$$

A	-978	B	-983	C	-977
D	-981	E	-979	F	-974

5 What is the determinant of this matrix?

$$\begin{bmatrix} -6 & 9 & 7 \\ 3 & 3 & -5 \\ -6 & -6 & -2 \end{bmatrix}$$

A	542	B	541	C	540
D	539	E	534	F	544

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6 The determinant is -9 and the adjoint is shown. Which is the inverse matrix?

$$\begin{bmatrix} -9 & 9 \\ -1 & 2 \end{bmatrix}$$

A

$$\begin{bmatrix} 1 & 0 \\ -2.89 & -0.22 \end{bmatrix}$$

B

$$\begin{bmatrix} -2 & -3 \\ 0.11 & -0.22 \end{bmatrix}$$

C

$$\begin{bmatrix} 1 & -2 \\ 0.11 & -0.22 \end{bmatrix}$$

D

$$\begin{bmatrix} 1 & -1 \\ 0.11 & -0.22 \end{bmatrix}$$

7 The determinant is -18 and the adjoint is shown. Which is the inverse matrix? Use $A^{-1} = \frac{1}{\vert A \vert} \text{adj}(A)$.

$$\begin{bmatrix} 4 & -6 \\ -3 & 0 \end{bmatrix}$$

A

$$\begin{bmatrix} 1.78 & 0.33 \\ 0.17 & 0 \end{bmatrix}$$

B

$$\begin{bmatrix} 1.78 & 0.33 \\ 3.17 & 0 \end{bmatrix}$$

C

$$\begin{bmatrix} -0.22 & -0.67 \\ 0.17 & 0 \end{bmatrix}$$

D

$$\begin{bmatrix} -0.22 & 0.33 \\ 0.17 & 0 \end{bmatrix}$$