



Determine the transpose of a matrix

- 1 Which matrix is the transpose of this matrix?

$$\begin{bmatrix} -7 & 0 \\ 1 & 6 \end{bmatrix}$$

A

$$\begin{bmatrix} -7 & 1 \\ -3 & 6 \end{bmatrix}$$

B

$$\begin{bmatrix} -7 & 1 \\ 0 & 3 \end{bmatrix}$$

C

$$\begin{bmatrix} -7 & 1 \\ 0 & 6 \end{bmatrix}$$

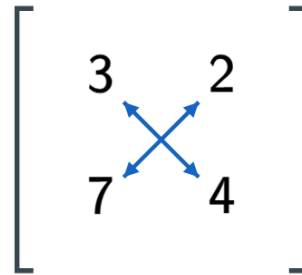
D

$$\begin{bmatrix} -7 & 1 \\ 0 & 4 \end{bmatrix}$$

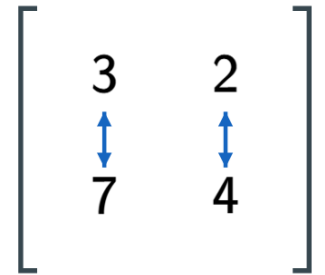
- 2 Which diagram shows how the values move to form the transpose?

$$\begin{bmatrix} 3 & 2 \\ 7 & 4 \end{bmatrix}$$

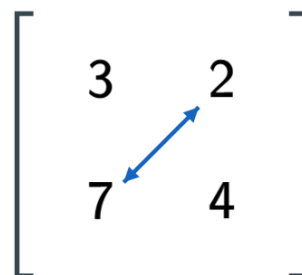
A



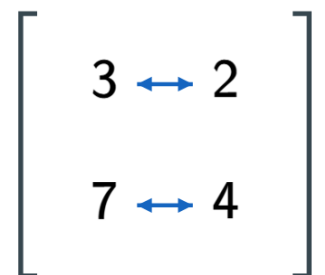
B



C



D



- 3 Which matrix is the transpose of this matrix?

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

A

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

B

$$\begin{bmatrix} 4 & 6 & -2 \\ -2 & 4 & -5 \\ 3 & 9 & 5 \end{bmatrix}$$

C

$$\begin{bmatrix} 4 & 8 & -2 \\ -2 & 6 & -2 \\ 5 & 9 & 5 \end{bmatrix}$$

D

$$\begin{bmatrix} 4 & 6 & -2 \\ 1 & 6 & -5 \\ 5 & 9 & 5 \end{bmatrix}$$

**Determine the transpose of a matrix**

- 4 Which is the adjoint of this cofactor matrix?
The adjoint is the transpose of the cofactor matrix: $\text{adj}(A) = C^T$.

$$\begin{bmatrix} 5 & -1 & 3 \\ -9 & 2 & -3 \\ 5 & -4 & -2 \end{bmatrix}$$

A $\begin{bmatrix} 5 & -9 & 5 \\ -1 & 4 & -4 \\ 3 & -3 & -2 \end{bmatrix}$

B $\begin{bmatrix} 5 & -7 & 5 \\ -1 & 2 & -4 \\ 3 & -3 & -1 \end{bmatrix}$

C $\begin{bmatrix} 5 & -9 & 5 \\ -1 & 2 & -4 \\ 3 & -3 & -2 \end{bmatrix}$

D $\begin{bmatrix} 5 & -9 & 3 \\ -1 & 2 & -4 \\ 3 & -3 & -2 \end{bmatrix}$

- 5 Which matrix is the transpose of this matrix?

$$\begin{bmatrix} -4 & 0 & -5 \\ 7 & 6 & 9 \\ -2 & -3 & 5 \end{bmatrix}$$

A $\begin{bmatrix} -6 & 7 & -2 \\ 0 & 6 & -3 \\ -5 & 9 & 5 \end{bmatrix}$

B $\begin{bmatrix} -4 & 7 & -2 \\ 0 & 6 & -3 \\ -5 & 9 & 5 \end{bmatrix}$

C $\begin{bmatrix} -4 & 7 & -2 \\ 0 & 4 & -1 \\ -5 & 9 & 5 \end{bmatrix}$

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

- 6 Which is the adjoint of this cofactor matrix? The adjoint is the transpose of the cofactor matrix: $\text{adj}(A) = C^T$.

$$\begin{bmatrix} 7 & 3 \\ -8 & 3 \end{bmatrix}$$

A $\begin{bmatrix} 7 & -8 \\ 3 & 3 \end{bmatrix}$

B $\begin{bmatrix} 7 & -8 \\ 0 & 3 \end{bmatrix}$

C $\begin{bmatrix} 7 & -8 \\ 6 & 3 \end{bmatrix}$

D $\begin{bmatrix} 6 & -8 \\ 5 & 3 \end{bmatrix}$

- 7 Which is the adjoint of this cofactor matrix? The adjoint is the transpose of the cofactor matrix: $\text{adj}(A) = C^T$.

$$\begin{bmatrix} -7 & 2 & -3 \\ 8 & 7 & -6 \\ 7 & 3 & -7 \end{bmatrix}$$

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

B $\begin{bmatrix} -9 & 8 & 8 \\ 2 & 7 & 3 \\ -3 & -6 & -7 \end{bmatrix}$

C $\begin{bmatrix} -7 & 8 & 7 \\ 2 & 7 & 3 \\ -4 & -6 & -7 \end{bmatrix}$

D $\begin{bmatrix} -7 & 8 & 7 \\ 2 & 7 & 3 \\ -3 & -6 & -7 \end{bmatrix}$