**Simplify expressions involving matrix addition, subtraction, and scalar...**

- 1** Find the result of $4A$.

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

$$[8pt] 4A = \begin{bmatrix} ? \end{bmatrix}$$

A

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

B

$$\begin{bmatrix} -8 & 28 \\ -12 & 20 \end{bmatrix}$$

C

$$\begin{bmatrix} -10 & 35 \\ -15 & 25 \end{bmatrix}$$

D

$$\begin{bmatrix} 8 & -28 \\ 12 & -20 \end{bmatrix}$$

- 2** Choose the result with the highlighted entry filled in correctly.

A

$$\begin{bmatrix} ? & ? \\ 8 & ? \end{bmatrix}$$

B

$$\begin{bmatrix} ? & ? \\ -16 & ? \end{bmatrix}$$

- 3** Which expression gives the value of the highlighted entry?

A

$$4 \cdot 4 + 5$$

B

$$4 \cdot 0 + 7$$

- 4** Find the result of $A + B$, or choose [undefined] if it cannot be computed.

$$A = \begin{bmatrix} -3 & -5 \\ 8 & 2 \\ 4 & 5 \\ -4 & -9 \end{bmatrix} \quad B = \begin{bmatrix} 0 & -7 \\ -6 & 9 \\ 6 & -5 \\ 3 & -8 \end{bmatrix}$$

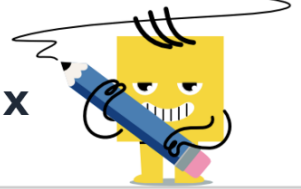
$$[8pt] A + B = \begin{bmatrix} ? \end{bmatrix}$$

A

$$\begin{bmatrix} -3 & 2 \\ 14 & -7 \\ -2 & 10 \\ -7 & -1 \end{bmatrix}$$

B

$$\begin{bmatrix} -3 & -12 \\ 2 & 11 \\ 10 & 0 \\ -1 & -17 \end{bmatrix}$$



Simplify expressions involving matrix addition, subtraction, and scalar...

- 5** Find the result of $A - B$, or choose [undefined] if it cannot be computed.

$$A = \begin{bmatrix} -5 & 0 & -8 & -3 \\ 6 & 5 & 8 & 2 \end{bmatrix} \quad B = \begin{bmatrix} 5 & -8 & 6 & 1 \\ -5 & -4 & 3 & -2 \end{bmatrix}$$

$$[8pt] A - B = \begin{bmatrix} ? \end{bmatrix}$$

A

$$[undefined]$$

B

$$\begin{bmatrix} -10 & 8 & -14 & -4 \\ 11 & 9 & 5 & 4 \end{bmatrix}$$

C

$$\begin{bmatrix} 0 & -8 & -2 & -2 \\ 1 & 1 & 11 & 0 \end{bmatrix}$$

D

$$\begin{bmatrix} -10 & 8 & -14 & -4 \\ 11 & 8 & 5 & 4 \end{bmatrix}$$

- 6** Choose the result with the highlighted column filled in correctly.

A

$$\begin{bmatrix} ? & ? & -9 \\ ? & ? & -26 \\ ? & ? & 27 \end{bmatrix}$$

B

$$\begin{bmatrix} ? & ? & -7 \\ ? & ? & -10 \\ ? & ? & 12 \end{bmatrix}$$

- 7** Which expression gives the value of the highlighted entry?

A

$$2 \cdot 8 - 6$$

B

$$2 \cdot 6 - 1$$

- 8** Choose the result with the highlighted column filled in correctly.

A

$$\begin{bmatrix} ? & 5 \\ ? & 24 \\ ? & -14 \end{bmatrix}$$

B

$$\begin{bmatrix} ? & 19 \\ ? & -7 \\ ? & 18 \end{bmatrix}$$

- 9** Which expression gives the value of the highlighted entry?

A

$$2 \cdot 4 + 4 \cdot 3$$

B

$$2 \cdot (-6) + 4 \cdot 3$$

- 10** Choose the result with the highlighted entry filled in correctly.

A

$$\begin{bmatrix} ? & ? & ? \\ 24 & ? & ? \\ ? & ? & ? \end{bmatrix}$$

B

$$\begin{bmatrix} ? & ? & ? \\ -12 & ? & ? \\ ? & ? & ? \end{bmatrix}$$

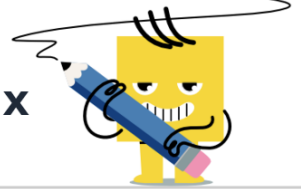
- 11** Which expression gives the value of the highlighted entry?

A

$$4 \cdot (-7) - 3 \cdot (-6)$$

B

$$4 \cdot 4 - 3 \cdot (-5)$$



Simplify expressions involving matrix addition, subtraction, and scalar...

- 12** Choose the result with the highlighted entry filled in correctly.

A

$$\begin{bmatrix} ? & ? & ? \\ ? & -16 & ? \end{bmatrix}$$

B

$$\begin{bmatrix} ? & ? & ? \\ ? & -4 & ? \end{bmatrix}$$

- 13** Find the result of $A + 2B$, or choose [undefined] if it cannot be computed.

$$A = \begin{bmatrix} -5 & 5 \\ -2 & 7 \\ 0 & -8 \end{bmatrix} \quad B = \begin{bmatrix} 8 & 1 \\ -5 & 9 \\ 6 & -8 \end{bmatrix}$$

[8pt] $A + 2B = [?]$

A

$$\begin{bmatrix} 11 & 6 \\ -12 & 25 \\ 12 & -24 \end{bmatrix}$$

B

$$\begin{bmatrix} -21 & 3 \\ 8 & -11 \\ -12 & 8 \end{bmatrix}$$

C

$$\begin{bmatrix} 3 & 6 \\ -7 & 16 \\ 6 & -16 \end{bmatrix}$$

D

$$\begin{bmatrix} 11 & 7 \\ -12 & 25 \\ 12 & -24 \end{bmatrix}$$

- 14** Find the result of $4A + 2B$, or choose [undefined] if it cannot be computed.

$$A = \begin{bmatrix} -3 & -1 & 6 \\ 0 & -4 & 2 \\ -8 & 1 & 9 \end{bmatrix} \quad B = \begin{bmatrix} -4 & -5 & -1 \\ -2 & 3 & -3 \\ 2 & 1 & -8 \end{bmatrix}$$

[8pt] $4A + 2B = [?]$

A

$$\begin{bmatrix} -7 & -6 & 5 \\ -2 & -1 & -1 \\ -6 & 2 & 1 \end{bmatrix}$$

B

$$\begin{bmatrix} -21 & -14 & 22 \\ -4 & -10 & 2 \\ -28 & 6 & 20 \end{bmatrix}$$

C

$$\begin{bmatrix} -4 & 6 & 26 \\ 4 & -22 & 14 \\ -36 & 2 & 52 \end{bmatrix}$$

D

$$\begin{bmatrix} -20 & -14 & 22 \\ -4 & -10 & 2 \\ -28 & 6 & 20 \end{bmatrix}$$