

Student Name: _____

Score: _____

Inverse matrix

MS1

Check whether inverse exists for the following matrices:

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

$$\Delta = \boxed{}$$

Conclusion: _____

$$\begin{bmatrix} \frac{4}{3} & -2 \\ 8 & -12 \end{bmatrix}$$

$$\Delta = \boxed{}$$

Conclusion: _____

$$\begin{bmatrix} \frac{5}{2} & 7 \\ \frac{2}{3} & 8 \end{bmatrix}$$

$$\Delta = \boxed{}$$

Conclusion: _____

$$\begin{bmatrix} \frac{3}{2} & 18 \\ \frac{1}{2} & 6 \end{bmatrix}$$

$$\Delta = \boxed{}$$

Conclusion: _____

$$\begin{bmatrix} 3 & -8 \\ -6 & 16 \end{bmatrix}$$

$$\Delta = \boxed{}$$

Conclusion: _____

$$\begin{bmatrix} \frac{4}{5} & \frac{6}{7} \\ \frac{7}{2} & \frac{10}{3} \end{bmatrix}$$

$$\Delta = \boxed{}$$

Conclusion: _____

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Answer Key

Inverse matrix

MS1

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

$$\Delta = -4 \neq 0$$

Conclusion: Inverse exists

$$\begin{bmatrix} \frac{4}{3} & -2 \\ 8 & -12 \end{bmatrix}$$

$$\Delta = 0$$

Conclusion: Inverse does not exist

$$\begin{bmatrix} \frac{5}{2} & 7 \\ \frac{2}{3} & 8 \end{bmatrix}$$

$$\Delta = \frac{46}{3} \neq 0$$

Conclusion: Inverse exists

$$\begin{bmatrix} \frac{3}{2} & 18 \\ \frac{1}{2} & 6 \end{bmatrix}$$

$$\Delta = 0$$

Conclusion: Inverse does not exist

$$\begin{bmatrix} 3 & -8 \\ -6 & 16 \end{bmatrix}$$

$$\Delta = 0$$

Conclusion: Inverse does not exist

$$\begin{bmatrix} \frac{4}{5} & \frac{6}{7} \\ \frac{7}{2} & \frac{10}{3} \end{bmatrix}$$

$$\Delta = -\frac{1}{3} \neq 0$$

Conclusion: Inverse exists