

Student Name: \_\_\_\_\_

Score: \_\_\_\_\_

**Inverse matrix**

MS2

Check whether inverse exists for the following matrices:

$$\begin{bmatrix} \frac{4}{3} & \frac{6}{5} \\ 20 & 18 \end{bmatrix}$$

$\Delta =$

Conclusion: \_\_\_\_\_

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

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

$\Delta =$

Conclusion: \_\_\_\_\_

$$\begin{bmatrix} \frac{1}{2} & \frac{5}{3} \\ \frac{7}{5} & \frac{6}{5} \end{bmatrix}$$

$\Delta =$

Conclusion: \_\_\_\_\_

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

$\Delta =$

Conclusion: \_\_\_\_\_

Student Name: \_\_\_\_\_

Score: \_\_\_\_\_

### Answer Key

## Inverse matrix

MS2

$$\begin{bmatrix} \frac{4}{3} & \frac{6}{5} \\ 20 & 18 \end{bmatrix}$$

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

$$\Delta = 0$$

Conclusion: Inverse does not exist

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

$$\Delta = -16 \neq 0$$

Conclusion: Inverse exists

$$\begin{bmatrix} \frac{1}{2} & \frac{5}{3} \\ \frac{7}{5} & \frac{6}{5} \end{bmatrix}$$

$$\Delta = -\frac{26}{15} \neq 0$$

Conclusion: Inverse exists

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exists

does not exist

$$\Delta = 0$$

Conclusion: Inverse does not exist