

# Matrices

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

Date: \_\_\_\_\_

## Inverse of 3x3 Matrices.

1) 
$$\begin{bmatrix} 2 & 3 & 6 \\ 0 & 1 & 5 \\ 4 & 2 & 5 \end{bmatrix}$$

$$\begin{bmatrix} \frac{-5}{13} & \frac{-3}{13} & \frac{9}{13} \\ \frac{26}{13} & \frac{26}{13} & \frac{26}{13} \\ \frac{10}{13} & \frac{-7}{13} & \frac{-5}{13} \\ \frac{13}{13} & \frac{13}{13} & \frac{13}{13} \\ \frac{-2}{13} & \frac{4}{13} & \frac{1}{13} \\ \frac{13}{13} & \frac{13}{13} & \frac{13}{13} \end{bmatrix}$$

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2) 
$$\begin{bmatrix} 6 & 5 & 1 \\ 2 & 4 & 2 \\ 3 & 0 & 5 \end{bmatrix}$$

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3) 
$$\begin{bmatrix} 3 & 2 & 6 \\ 1 & 4 & 5 \\ 0 & 6 & 6 \end{bmatrix}$$

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4) 
$$\begin{bmatrix} 6 & 3 & 1 \\ 2 & 1 & 2 \\ 3 & 4 & 5 \end{bmatrix}$$

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5) 
$$\begin{bmatrix} 1 & 2 & 5 \\ 0 & 3 & 3 \\ 4 & 5 & 4 \end{bmatrix}$$

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6) 
$$\begin{bmatrix} 2 & 2 & 1 \\ 4 & 3 & 5 \\ 5 & 5 & 1 \end{bmatrix}$$

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7) 
$$\begin{bmatrix} 2 & 3 & 1 \\ 5 & 6 & 3 \\ 1 & 0 & 4 \end{bmatrix}$$

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8) 
$$\begin{bmatrix} 5 & 4 & 2 \\ 4 & 2 & 6 \\ 1 & 2 & 0 \end{bmatrix}$$

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9) 
$$\begin{bmatrix} 2 & 2 & 5 \\ 6 & 1 & 3 \\ 5 & 4 & 2 \end{bmatrix}$$

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1) 
$$\begin{bmatrix} 2 & 3 & 6 \\ 0 & 1 & 5 \\ 4 & 2 & 5 \end{bmatrix}$$

$$\begin{bmatrix} \frac{-5}{13} & \frac{-3}{13} & \frac{9}{13} \\ \frac{26}{13} & \frac{26}{13} & \frac{26}{13} \\ \frac{10}{13} & \frac{-7}{13} & \frac{-5}{13} \\ \frac{13}{13} & \frac{13}{13} & \frac{13}{13} \\ \frac{-2}{13} & \frac{4}{13} & \frac{1}{13} \\ \frac{13}{13} & \frac{13}{13} & \frac{13}{13} \end{bmatrix}$$

2) 
$$\begin{bmatrix} 6 & 5 & 1 \\ 2 & 4 & 2 \\ 3 & 0 & 5 \end{bmatrix}$$

$$\begin{bmatrix} \frac{5}{22} & \frac{-25}{88} & \frac{3}{44} \\ \frac{22}{22} & \frac{88}{88} & \frac{44}{44} \\ \frac{-1}{22} & \frac{27}{88} & \frac{-5}{44} \\ \frac{22}{22} & \frac{88}{88} & \frac{44}{44} \\ \frac{-3}{22} & \frac{15}{88} & \frac{7}{44} \\ \frac{22}{22} & \frac{88}{88} & \frac{44}{44} \end{bmatrix}$$

3) 
$$\begin{bmatrix} 3 & 2 & 6 \\ 1 & 4 & 5 \\ 0 & 6 & 6 \end{bmatrix}$$

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

4) 
$$\begin{bmatrix} 6 & 3 & 1 \\ 2 & 1 & 2 \\ 3 & 4 & 5 \end{bmatrix}$$

$$\begin{bmatrix} \frac{3}{25} & \frac{11}{25} & \frac{-1}{5} \\ \frac{25}{4} & \frac{25}{-27} & \frac{5}{2} \\ \frac{25}{25} & \frac{25}{25} & \frac{5}{5} \\ \frac{-1}{5} & \frac{3}{5} & 0 \end{bmatrix}$$

5) 
$$\begin{bmatrix} 1 & 2 & 5 \\ 0 & 3 & 3 \\ 4 & 5 & 4 \end{bmatrix}$$

$$\begin{bmatrix} \frac{1}{13} & \frac{-17}{39} & \frac{3}{13} \\ \frac{13}{-4} & \frac{39}{16} & \frac{13}{1} \\ \frac{13}{4} & \frac{39}{-1} & \frac{13}{-1} \\ \frac{13}{13} & \frac{13}{13} & \frac{13}{13} \end{bmatrix}$$

6) 
$$\begin{bmatrix} 2 & 2 & 1 \\ 4 & 3 & 5 \\ 5 & 5 & 1 \end{bmatrix}$$

$$\begin{bmatrix} \frac{-22}{3} & 1 & \frac{7}{3} \\ 7 & -1 & -2 \\ \frac{5}{3} & 0 & \frac{-2}{3} \end{bmatrix}$$

7) 
$$\begin{bmatrix} 2 & 3 & 1 \\ 5 & 6 & 3 \\ 1 & 0 & 4 \end{bmatrix}$$

$$\begin{bmatrix} \frac{-8}{3} & \frac{4}{3} & \frac{-1}{3} \\ \frac{3}{17} & \frac{3}{-7} & \frac{3}{1} \\ \frac{9}{9} & \frac{9}{9} & \frac{9}{9} \\ \frac{2}{3} & \frac{-1}{3} & \frac{1}{3} \\ \frac{3}{3} & \frac{3}{3} & \frac{3}{3} \end{bmatrix}$$

8) 
$$\begin{bmatrix} 5 & 4 & 2 \\ 4 & 2 & 6 \\ 1 & 2 & 0 \end{bmatrix}$$

$$\begin{bmatrix} \frac{1}{2} & \frac{-1}{6} & \frac{-5}{6} \\ \frac{-1}{4} & \frac{1}{12} & \frac{11}{12} \\ \frac{4}{-1} & \frac{12}{1} & \frac{12}{1} \\ \frac{-1}{4} & \frac{1}{4} & \frac{1}{4} \\ \frac{4}{4} & \frac{4}{4} & \frac{4}{4} \end{bmatrix}$$

9) 
$$\begin{bmatrix} 2 & 2 & 5 \\ 6 & 1 & 3 \\ 5 & 4 & 2 \end{bmatrix}$$

$$\begin{bmatrix} \frac{-10}{81} & \frac{16}{81} & \frac{1}{81} \\ \frac{81}{1} & \frac{81}{-7} & \frac{81}{8} \\ \frac{27}{27} & \frac{27}{27} & \frac{27}{27} \\ \frac{19}{81} & \frac{2}{81} & \frac{-10}{81} \end{bmatrix}$$