

# Matrices

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

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

## Inverse of 3x3 Matrices.

1) 
$$\begin{bmatrix} 3 & 12 & 4 \\ 9 & 2 & 7 \\ 10 & 2 & 5 \end{bmatrix}$$

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2) 
$$\begin{bmatrix} 13 & 8 & 7 \\ 15 & 2 & 9 \\ 14 & 4 & 5 \end{bmatrix}$$

\_\_\_\_\_

3) 
$$\begin{bmatrix} 6 & 7 & 11 \\ 2 & 8 & 4 \\ 6 & 3 & 5 \end{bmatrix}$$

\_\_\_\_\_

4) 
$$\begin{bmatrix} 2 & 17 & 5 \\ 6 & 13 & 9 \\ 13 & 8 & 7 \end{bmatrix}$$

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5) 
$$\begin{bmatrix} 13 & 7 & 3 \\ 9 & 8 & 14 \\ 16 & 10 & 4 \end{bmatrix}$$

\_\_\_\_\_

6) 
$$\begin{bmatrix} 15 & 7 & 4 \\ 8 & 2 & 10 \\ 9 & 11 & 3 \end{bmatrix}$$

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7) 
$$\begin{bmatrix} 13 & 14 & 8 \\ 2 & 9 & 17 \\ 6 & 3 & 7 \end{bmatrix}$$

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8) 
$$\begin{bmatrix} 13 & 1 & 10 \\ 3 & 12 & 7 \\ 4 & 9 & 14 \end{bmatrix}$$

\_\_\_\_\_

9) 
$$\begin{bmatrix} 15 & 9 & 10 \\ 3 & 5 & 4 \\ 6 & 12 & 1 \end{bmatrix}$$

\_\_\_\_\_

# Matrices

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## Inverse of 3x3 Matrices.

1) 
$$\begin{bmatrix} 3 & 12 & 4 \\ 9 & 2 & 7 \\ 10 & 2 & 5 \end{bmatrix}$$

$$\begin{bmatrix} \frac{-1}{70} & \frac{-13}{70} & \frac{19}{70} \\ \frac{5}{56} & \frac{-5}{56} & \frac{3}{56} \\ \frac{-1}{140} & \frac{57}{140} & \frac{-51}{140} \end{bmatrix}$$

2) 
$$\begin{bmatrix} 13 & 8 & 7 \\ 15 & 2 & 9 \\ 14 & 4 & 5 \end{bmatrix}$$

$$\begin{bmatrix} \frac{-13}{147} & \frac{-2}{49} & \frac{29}{147} \\ \frac{17}{98} & \frac{-11}{98} & \frac{-2}{49} \\ \frac{16}{147} & \frac{10}{49} & \frac{-47}{147} \end{bmatrix}$$

3) 
$$\begin{bmatrix} 6 & 7 & 11 \\ 2 & 8 & 4 \\ 6 & 3 & 5 \end{bmatrix}$$

$$\begin{bmatrix} \frac{-1}{7} & \frac{1}{98} & \frac{15}{49} \\ \frac{-1}{14} & \frac{9}{49} & \frac{1}{98} \\ \frac{3}{14} & \frac{-6}{49} & \frac{-17}{98} \end{bmatrix}$$

4) 
$$\begin{bmatrix} 2 & 17 & 5 \\ 6 & 13 & 9 \\ 13 & 8 & 7 \end{bmatrix}$$

$$\begin{bmatrix} \frac{19}{708} & \frac{-79}{708} & \frac{22}{177} \\ \frac{25}{236} & \frac{-17}{236} & \frac{1}{59} \\ \frac{-121}{708} & \frac{205}{708} & \frac{-19}{177} \end{bmatrix}$$

5) 
$$\begin{bmatrix} 13 & 7 & 3 \\ 9 & 8 & 14 \\ 16 & 10 & 4 \end{bmatrix}$$

$$\begin{bmatrix} \frac{54}{101} & \frac{-1}{101} & \frac{-37}{101} \\ \frac{-94}{101} & \frac{-2}{101} & \frac{155}{202} \\ \frac{19}{101} & \frac{9}{101} & \frac{-41}{202} \end{bmatrix}$$

6) 
$$\begin{bmatrix} 15 & 7 & 4 \\ 8 & 2 & 10 \\ 9 & 11 & 3 \end{bmatrix}$$

$$\begin{bmatrix} \frac{52}{409} & \frac{-23}{818} & \frac{-31}{409} \\ \frac{-33}{409} & \frac{-9}{818} & \frac{59}{409} \\ \frac{-35}{409} & \frac{51}{409} & \frac{13}{409} \end{bmatrix}$$

7) 
$$\begin{bmatrix} 13 & 14 & 8 \\ 2 & 9 & 17 \\ 6 & 3 & 7 \end{bmatrix}$$

$$\begin{bmatrix} \frac{3}{251} & \frac{-37}{502} & \frac{83}{502} \\ \frac{22}{251} & \frac{43}{1004} & \frac{-205}{1004} \\ \frac{-12}{251} & \frac{45}{1004} & \frac{89}{1004} \end{bmatrix}$$

8) 
$$\begin{bmatrix} 13 & 1 & 10 \\ 3 & 12 & 7 \\ 4 & 9 & 14 \end{bmatrix}$$

$$\begin{bmatrix} \frac{15}{163} & \frac{76}{1141} & \frac{-113}{1141} \\ \frac{-2}{163} & \frac{142}{1141} & \frac{-61}{1141} \\ \frac{-3}{163} & \frac{-113}{1141} & \frac{153}{1141} \end{bmatrix}$$

9) 
$$\begin{bmatrix} 15 & 9 & 10 \\ 3 & 5 & 4 \\ 6 & 12 & 1 \end{bmatrix}$$

$$\begin{bmatrix} \frac{43}{396} & \frac{-37}{132} & \frac{7}{198} \\ \frac{-7}{132} & \frac{5}{44} & \frac{5}{66} \\ \frac{-1}{66} & \frac{7}{22} & \frac{-4}{33} \end{bmatrix}$$