Name_____

Determinants of 2×2 Matrices

Date_____ Period____

Evaluate the determinant of each matrix.

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

2) $\begin{bmatrix} -6 & 0 \\ 6 & -6 \end{bmatrix}$

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

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

5) $\begin{bmatrix} 0 & -1 \\ 6 & -6 \end{bmatrix}$

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

Evaluate each determinant.

7) $\begin{vmatrix} -5 & 3 \\ 4 & 2 \end{vmatrix}$

8) $\begin{vmatrix} -9 & -9 \\ -7 & -10 \end{vmatrix}$

9) $\begin{vmatrix} -1 & 8 \\ 5 & 0 \end{vmatrix}$

10) $\begin{vmatrix} 8 & -6 \\ -10 & 9 \end{vmatrix}$

11) $\begin{vmatrix} 0 & 6 \\ -8 & 0 \end{vmatrix}$

12) $\begin{vmatrix} 10 & -9 \\ -7 & 3 \end{vmatrix}$

13) $\begin{vmatrix} -5 & 0 \\ 2 & 10 \end{vmatrix}$

14) $\begin{vmatrix} 2 & -2 \\ 7 & -7 \end{vmatrix}$

15) Evaluate:

$\begin{vmatrix} 1 & 2 \\ 3 & 4 \end{vmatrix} + \begin{vmatrix} 5 & 2 \\ -2 & 6 \end{vmatrix}$

16) Give an example of a 2×2 matrix whose determinant is 13.

Name_____

Determinants of 2×2 Matrices

Date_____ Period_____

Evaluate the determinant of each matrix.

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

    −24

2) $\begin{bmatrix} -6 & 0 \\ 6 & -6 \end{bmatrix}$

    36

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

    −3

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

    −24

5) $\begin{bmatrix} 0 & -1 \\ 6 & -6 \end{bmatrix}$

    6

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

    12

Evaluate each determinant.

7) $\begin{vmatrix} -5 & 3 \\ 4 & 2 \end{vmatrix}$

    −22

8) $\begin{vmatrix} -9 & -9 \\ -7 & -10 \end{vmatrix}$

    27

9) $\begin{vmatrix} -1 & 8 \\ 5 & 0 \end{vmatrix}$

    −40

10) $\begin{vmatrix} 8 & -6 \\ -10 & 9 \end{vmatrix}$

    12

11) $\begin{vmatrix} 0 & 6 \\ -8 & 0 \end{vmatrix}$

    48

12) $\begin{vmatrix} 10 & -9 \\ -7 & 3 \end{vmatrix}$

    −33

13) $\begin{vmatrix} -5 & 0 \\ 2 & 10 \end{vmatrix}$

    −50

14) $\begin{vmatrix} 2 & -2 \\ 7 & -7 \end{vmatrix}$

    0

15) Evaluate:

$\begin{vmatrix} 1 & 2 \\ 3 & 4 \end{vmatrix} + \begin{vmatrix} 5 & 2 \\ -2 & 6 \end{vmatrix}$

    32

16) Give an example of a 2×2 matrix whose determinant is 13.

    Many answers. Ex: $\begin{bmatrix} 4 & 13 \\ 1 & 5 \end{bmatrix}$