

**EXERCISE A**

Find the value of each determinant.

1)  $\begin{vmatrix} 7 & 8 \\ 3 & -2 \end{vmatrix}$

2)  $\begin{vmatrix} -3 & -6 \\ 4 & 8 \end{vmatrix}$

3)  $\begin{vmatrix} -1 & 7 \\ 7 & -8 \end{vmatrix}$

4)  $\begin{vmatrix} 1 & 5 \\ -1 & -5 \end{vmatrix}$

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

6)  $\begin{vmatrix} 2 & 3 & 4 \\ 6 & 5 & 7 \\ 1 & 2 & 8 \end{vmatrix}$

7) What is the area of  $\triangle ABC$  with  $A(5, 4)$ ,  $B(3, -4)$  and  $C(-3, -2)$ ? Hint: you may have to consult the notes for this one.**EXERCISE B**

Find the value of each determinant.

8)  $\begin{vmatrix} 10 & 6 \\ 5 & 5 \end{vmatrix}$

9)  $\begin{vmatrix} 8 & 5 \\ 6 & 1 \end{vmatrix}$

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

11)  $\begin{vmatrix} -3.2 & -5.8 \\ 4.1 & 3.9 \end{vmatrix}$

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

13)  $\begin{vmatrix} 1 & 5 & -4 \\ -7 & 3 & 2 \\ 6 & 3 & -1 \end{vmatrix}$

14)  $\begin{vmatrix} 8 & -9 & 0 \\ 1 & 5 & 4 \\ 6 & -2 & 3 \end{vmatrix}$

**EXERCISE C**15) Find the area of a triangle whose vertices are located at  $(4, 1)$ ,  $(2, -1)$  and  $(0, 2)$ . Hint: you might want to look at the notes for this one.16) Solve for  $x$  in the following problem:

$$\det \begin{vmatrix} 4 & x & -2 \\ -x & -3 & 1 \\ -6 & 2 & 3 \end{vmatrix} = -3$$

ANSWERS:

1) -38

5) -28

9) -22

13) 172

3) -41

7)  $26 \text{ units}^2$

11) 11.3

15)  $14.5 \text{ units}^2$