



Fig. 38

11. Evaluate the expression

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

- (1) 18    (3) -3    (5) 3    (7) 28  
 (2) -6    (4) -2    (6) 2

12. Plot on the same graph the curves of the following system of five linear equations. Plot each curve for the range of  $x$  shown. For example, plot  $L_1$  so that it extends from  $x = -4$  to  $x = 4$ .

$$\begin{array}{ll} 5x + 6y = 22 & -4 \leq x \leq 4 \quad (L_1) \\ 11y - x = 81 & -4 \leq x \leq 7 \quad (L_2) \\ 25x + 30y = 110 & -4 \leq x \leq 4 \quad (L_3) \\ 9y - 23x = -89 & 4 \leq x \leq 7 \quad (L_4) \\ 33y - 3x = 243 & -4 \leq x \leq 7 \quad (L_5) \end{array}$$

The five linear curves form a

- (1) circle.    (2) triangle.    (3) rectangle.    (4) square.