



Level-2, TEST-

Name:

Mob No.

Rough Work

1. The length of perpendicular from the origin to a line is 7 and the line makes an angle of  $150^\circ$  degree with positive direction of Y-axis, then the equation of line is:

- (a)  $x+y=14$  (b)  $\sqrt{3}x+y=14$   
 (c)  $\sqrt{3}y+x=14$  (d) None of these

2. The distance of the point of intersection of lines  $2x-3y+5=0$ ; and  $3x+4y=0$  from the line  $5x-2y=0$  is:

- (a)  $\frac{130}{17\sqrt{29}}$  (b)  $\frac{130}{7}$  (c)  $\frac{13\sqrt{29}}{7}$  (d) None of these

3. If the lines  $x+q=0$ ,  $y-2=0$  and  $3x+2y+5=0$ ; are concurrent, then the value of  $q$  will be:

- (a) 1 (b) 3 (c) 2 (d) 5

4. The line segment joining the points  $(-3,-4)$  and  $(1, -2)$  is divided by Y-axis is:

- (a) 1:3 (b) 3:1 (c) 2:3 (d) 3:2

These questions consist of two statements each, printed as Assertion and Reason. While answering these questions you are required to choose any one of the following four responses.

- (a) Assertion (A) and Reason (R) both are correct statements and Reason (R) is the correct explanation for assertion (A).  
 (b) Assertion (A) and Reason (R) both are correct statements but Reason (R) is not the correct explanation for Assertion (A).  
 (c) Assertion (A) is correct statement but reason (R) is wrong statement.  
 (d) Assertion (A) is wrong statement but Reason (R) is correct statement.

5.

**Assertion:** Angle between the lines  $x-2y+3=0$  and  $3x+y-1=0$  is  $\tan^{-1}(7)$ .

**Reason:** The acute angle  $\theta$  between the lines  $a_1x+b_1y+c_1=0$  and  $a_2x+b_2y+c_2=0$  is given by  $\tan\theta = \left| \frac{m_2+m_1}{1-m_1m_2} \right|$ .

6.

**Assertion:** The image of the point  $(-8,12)$  with respect to the line mirror  $4x+7y+13=0$  is  $(-16,-2)$ .

**Reason:** The equation X-axis is  $y=0$ .



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MATHEMATICS

Level-2, TEST-

Rough Work

7. Find the equation of the perpendicular drawn from the point  $P(-2,3)$  to the line  $x-4y+7=0$ . Also, find the coordinates of the foot of the perpendicular.
8. Find equation of the line mid way between the parallel line  $9x+6y-7=0$  and  $3x+2y+6=0$ .
9. Assuming that straight lines work as the plane mirror for a point, find the image of the point  $(1,2)$  in the line  $x-3y+4=0$ .