



9. The equations of the lines which cuts off an intercept -1 from y -axis are equally inclined to the axes are
 (a) _____
 (b) _____
 (c) _____
 (d) None of these
10. A line L is perpendicular to the line _____ and the area of the triangle formed by the line L and coordinate axes is 5 . The equation of the line L is [IIT 1980; RPET 1997]
 (a) _____ (b) _____
 (c) _____ (d) _____
11. The equation of the line whose slope is 3 and which cuts off an intercept 3 from the positive x -axis is
 (a) _____ (b) _____
 (c) _____ (d) None of these
12. If the coordinates of the points A, B, C, D , be _____ and _____ respectively, then the equation of the line bisecting the line segments AB and CD is
 (a) _____ (b) _____
 (c) _____ (d) None of these
13. The equation of the straight line passing through the point $(3, 2)$ and perpendicular to the line $y = x$ is [MNR 1979]
 (a) _____ (b) _____
 (c) _____ (d) _____
14. If the coordinates of A and B be $(1, 1)$ and $(5, 7)$, then the equation of the perpendicular bisector of the line segment AB is
 (a) _____ (b) _____
 (c) _____ (d) _____
15. If the coordinates of the points A, B, C be $(-1, 5), (0, 0)$ and $(2, 2)$ respectively and D be the middle point of BC , then the equation of the perpendicular drawn from B to the line AD is
 (a) _____ (b) _____
 (c) _____ (d) _____
16. The equation of the line passing through the point _____ and perpendicular to the line _____ is
 (a) _____
 (b) _____
 (c) _____
 (d) _____
17. If the middle points of the sides BC, CA and AB of the triangle ABC be $(1, 3), (5, 7)$ and $(-5, 7)$, then the equation of the side AB is
 (a) _____ (b) _____
- (c) _____ (d) None of these
18. If the coordinates of the vertices of the triangle ABC be $(-1, 6), (-3, -9)$, and $(5, -8)$ respectively, then the equation of the median through C is
 (a) _____ (b) _____
 (c) _____ (d) _____
19. The equation of the line perpendicular to the line _____ and passing through the point at which it cuts x -axis, is [RPET 1996; Kerala (Engg.) 2002]
 (a) _____ (b) _____
 (c) _____ (d) _____
20. The equation of the line passing through the point $(1, 2)$ and perpendicular to the line _____ is [MNR 1981]
 (a) _____ (b) _____
 (c) _____ (d) _____
21. A line passes through the point $(3, 4)$ and cuts off intercepts from the coordinates axes such that their sum is 14 . The equation of the line is
 (a) _____ (b) _____
 (c) _____ (d) _____
22. The equation of the line bisecting the line segment joining the points (a, b) and _____ at right angle, is
 (a) _____
 (b) _____
 (c) _____
 (d) None of these
23. The equations of the lines which pass through the origin and are inclined at an angle _____ to the line _____ are
 (a) _____
 (b) _____
 (c) _____
 (d) None of these
24. A line meets x -axis and y -axis at the points A and B respectively. If the middle point of AB be _____ then the equation of the line is
 (a) _____ (b) _____
 (c) _____ (d) _____



25. The equation of the line parallel to the line _____ and passing through the middle point of the line segment joining the points $(1, 3)$ and $(1, -7)$, is
 (a) _____ (b) _____
 (c) _____ (d) _____
26. The equation of the lines which passes through the point $(3, -2)$ and are inclined at _____ to the line _____
 [IIT 1974; MP PET 1996]
 (a) _____
 (b) _____
 (c) _____
 (d) None of these
27. The equations of the lines passing through the point $(1, 0)$ and at a distance _____ from the origin, are
 (a) _____
 (b) _____
 (c) _____
 (d) None of these
28. The equation of a straight line passing through _____ and cutting an intercept equal in magnitude but opposite in sign from the axes is given by _____
 [RPET 1984; MP PET 1993]
 (a) _____ (b) _____
 (c) _____ (d) _____
29. The equation of a line passing through the point of intersection of the lines _____ and perpendicular to the line _____ is given by _____
 [RPET 1987; MP PET 1993; Pb. CET 2000]
 (a) _____ (b) _____
 (c) _____ (d) _____
30. A line passes through the point of intersection of _____ and _____ and parallel to the line _____ is _____
 [RPET 1984; MP PET 1991]
 (a) _____ (b) _____
 (c) _____ (d) _____
31. The equation of the line joining the origin to the point $(-4, 5)$, is _____
 [MP PET 1984]
 (a) _____ (b) _____
 (c) _____ (d) _____
32. The equation of the line which cuts off an intercept 3 units on OX and an intercept -2 unit on OY , is _____
 [MP PET 1984]
 (a) _____ (b) _____
- (c) _____ (d) _____
33. The equation of a line through _____ and perpendicular to the line _____ is _____
 [RPET 1981, 84, 86; MP PET 1984]
 (a) _____ (b) _____
 (c) _____ (d) _____
34. Equation of the line passing through $(1, 2)$ and parallel to the line _____ is _____
 [MP PET 1984]
 (a) _____ (b) _____
 (c) _____ (d) _____
35. Equation of the line passing through $(-1, 1)$ and perpendicular to the line _____ is _____
 [MP PET 1984]
 (a) _____ (b) _____
 (c) _____ (d) _____
36. The equation of a line through the intersection of lines _____ and _____ and through the point $(2, 2)$, is _____
 [MP PET 1984]
 (a) _____ (b) _____
 (c) _____ (d) _____
37. Equation of a line through the origin and perpendicular to, the line joining $(a, 0)$ and $(-a, 0)$, is _____
 [MP PET 1984]
 (a) _____ (b) _____
 (c) _____ (d) _____
38. For specifying a straight line how many geometrical parameters should be known _____
 [MP PET 1982]
 (a) 1 (b) 2
 (c) 4 (d) 3
39. The points $A(1, 3)$ and $C(5, 1)$ are the opposite vertices of rectangle. The equation of line passing through other two vertices and of gradient 2, is _____
 [RPET 1991]
 (a) _____ (b) _____
 (c) _____ (d) _____
40. The intercept cut off from y -axis is twice that from x -axis by the line and line is passes through $(1, 2)$ then its equation is _____
 [AMU 1972; RPET 1985]
 (a) _____ (b) _____
 (c) _____ (d) _____
41. The equation of line, which bisect the line joining two points $(2, -19)$ and $(6, 1)$ and perpendicular to the line joining two points $(-1, 3)$ and $(5, -1)$, is _____
 [RPET 1987]
 (a) _____ (b) _____
 (c) _____ (d) None of these
42. The equation of line whose mid point is _____ in between the axes, is _____
 [RPET 1988]
 (a) _____ (b) _____



- (c) (d) None of these
43. The equation of line passing through (c, d) and parallel to is [RPET 1987]
 (a) (b)
 (c) (d) None of these
44. The equation of line passing through point of intersection of lines and and the point is [RPET 1987]
 (a) (b)
 (c) (d)
45. A line perpendicular to the line and passes through The equation of the line is [RPET 1988; MP PET 1995]
 (a) (b)
 (c) (d) None of these
46. The equation of line passing through the point of intersection of the lines and and parallel to the line is [RPET 1985, 86, 88]
 (a) (b)
 (c) (d)
47. The equation of the line passing through $(4, -6)$ and makes an angle with positive x -axis, is [RPET 1984]
 (a) (b)
 (c) (d) None of these
48. The equation of the line passes through and parallel to the line is [RPET 1986, 95]
 (a) (b)
 (c) (d)
49. Equation of the hour hand at 4 O' clock is
 (a) (b)
 (c) (d)
50. Equation of a straight line on which length of perpendicular from the origin is four units and the line makes an angle of with the x -axis, is [MNR 1986]
 (a) (b)
 (c) (d)
51. The straight line passes through the point of inter- section of the straight lines and is [IIT 1983]
- (a) (b)
 (c) (d)
52. The equation to the straight line passing through the point and perpendicular to the line is [AMU 1975]
 (a)
 (b)
 (c)
 (d) None of these
53. Equation of the perpendicular bisector of the line segment joining the points $(7, 4)$ and $(-1, -2)$, is [AMU 1979]
 (a) (b)
 (c) (d) None of these
54. Equations of the two straight lines passing through the point $(3, 2)$ and making an angle of with the line are [AMU 1978]
 (a) and
 (b) and
 (c) and
 (d) None of these
55. Equations of lines which passes through the points of intersection of the lines and and are equally inclined to the axes are [AMU 1981]
 (a) (b)
 (c) (d) None of these
56. The equations of two lines through which are at distance 'a' from the point are [Dhanbad Engg. 1972]
 (a) and
 (b) and
 (c) and
 (d) None of these
57. A line is such that its segment between the straight lines and is bisected at the point $(1, 5)$, then its equation is [Roorkee 1988]
 (a) (b)
 (c) (d) None of these
58. Equation of the line which passes through the point and the portion of the line intercepted between the axes is divided internally in the ratio $5 : 3$ by this point, is [AMU 1973; Dhanbad Engg. 1971]
 (a) (b)
 (c) (d) None of these
59. The equation of a straight line passing through the points and $(3, 10)$, is [MNR 1974]



- (a) (b) (c) (d) None of these
60. The equations of the lines through the point of intersection of the lines $2x + 3y = 7$ and $x + 2y = 4$ and whose distance from the point $(3, 2)$ is $\frac{1}{\sqrt{5}}$ is $3x + 2y - 13 = 0$ is [IIT 1963]
- (a) $3x + 2y - 13 = 0$ and
 (b) $3x + 2y - 13 = 0$ and
 (c) $3x + 2y - 13 = 0$ and
 (d) None of these
61. The equation of the line which cuts off the intercepts 3 and 4 on the axes is
- (a) $4x + 3y = 12$
 (b) $3x + 4y = 12$
 (c) $4x + 3y = 12$
 (d) $3x + 4y = 12$
62. If the equation $2x + 3y = 7$ and $x + 2y = 4$ represents the same straight line, then
- (a) $2x + 3y = 7$ (b) $x + 2y = 4$
 (c) $2x + 3y = 7$ (d) $x + 2y = 4$
63. The equation to the straight line passing through the point of intersection of the lines $2x + 3y = 7$ and $x + 2y = 4$ and perpendicular to the line $3x + 2y = 13$ is [MP PET 1994]
- (a) $3x + 2y - 13 = 0$ (b) $3x + 2y - 13 = 0$
 (c) $3x + 2y - 13 = 0$ (d) $3x + 2y - 13 = 0$
64. Line passing through $(1, 2)$ and $(2, 5)$ is [RPET 1995]
- (a) $3x - 2y + 1 = 0$ (b) $3x - 2y + 1 = 0$
 (c) $3x - 2y + 1 = 0$ (d) $3x - 2y + 1 = 0$
65. Equation of line passing through $(1, 2)$ and perpendicular to $3x + 2y = 13$ is [RPET 1995]
- (a) $3x + 2y - 13 = 0$ (b) $3x + 2y - 13 = 0$
 (c) $3x + 2y - 13 = 0$ (d) $3x + 2y - 13 = 0$
66. The number of lines that are parallel to $3x + 2y = 13$ and have an intercept of length 10 between the coordinate axes is
- (a) 1 (b) 2
 (c) 4 (d) Infinitely many
67. A line passes through $(2, 2)$ and is perpendicular to the line $3x + 2y = 13$. Its y -intercept is [IIT Screening 1992]
- (a) 1 (b) 2
 (c) 1 (d) 2
68. A straight line makes an angle of 45° with the x -axis and cuts y -axis at a distance 5 from the origin. The equation of the line is [MP PET 1998]
- (a) $x - y + 5 = 0$ (b) $x - y + 5 = 0$
 (c) $x - y + 5 = 0$ (d) $x - y + 5 = 0$
- (a) (b) (c) (d)
69. A straight line through $P(1, 2)$ is such that its intercept between the axes is bisected at P . Its equation is [EAMCET 1994]
- (a) $3x + 2y - 13 = 0$ (b) $3x + 2y - 13 = 0$
 (c) $3x + 2y - 13 = 0$ (d) $3x + 2y - 13 = 0$
70. The equation of the straight line joining the point $(1, 2)$ to the point of intersection of the lines $2x + 3y = 7$ and $x + 2y = 4$ is
- (a) $3x + 2y - 13 = 0$ (b) $3x + 2y - 13 = 0$
 (c) $3x + 2y - 13 = 0$ (d) $3x + 2y - 13 = 0$
71. The equations of the lines through the origin making an angle of 45° with the line $3x + 2y = 13$ are
- (a) $3x + 2y - 13 = 0$ (b) $3x + 2y - 13 = 0$
 (c) $3x + 2y - 13 = 0$ (d) $3x + 2y - 13 = 0$
72. The point $(1, 2)$ lies on the straight line $3x + 2y = 13$ and the point $(2, 5)$ lies on the straight line $3x + 2y = 13$ then the equation of line PQ is [MP PET 1999]
- (a) $3x + 2y - 13 = 0$ (b) $3x + 2y - 13 = 0$
 (c) $3x + 2y - 13 = 0$ (d) $3x + 2y - 13 = 0$
73. The equation of the line passing through $(1, 1)$ and parallel to the line $3x + 2y = 13$ is [RPET 1996]
- (a) $3x + 2y - 13 = 0$ (b) $3x + 2y - 13 = 0$
 (c) $3x + 2y - 13 = 0$ (d) $3x + 2y - 13 = 0$
74. If the intercept made by the line between the axis is bisected at the point $(5, 2)$, then its equation is [RPET 1996]
- (a) $3x + 2y - 13 = 0$ (b) $3x + 2y - 13 = 0$
 (c) $3x + 2y - 13 = 0$ (d) $3x + 2y - 13 = 0$
75. The equation of straight line passing through the intersection of the lines $2x + 3y = 7$ and $x + 2y = 4$ and parallel to $3x + 2y = 13$ is [MP PET 2000]
- (a) $3x + 2y - 13 = 0$ (b) $3x + 2y - 13 = 0$
 (c) $3x + 2y - 13 = 0$ (d) $3x + 2y - 13 = 0$
76. Equation of a line passing through the point of intersection of lines $2x + 3y = 7$ and $x + 2y = 4$ and perpendicular to $3x + 2y = 13$ then its equation is [RPET 2000]
- (a) $3x + 2y - 13 = 0$ (b) $3x + 2y - 13 = 0$
 (c) $3x + 2y - 13 = 0$ (d) None of these
77. If we reduce $3x + 2y = 13$ to the form $ax + by + c = 0$ then the value of p is [MP PET 2001]



- (a) (b)
- (c) (d)
78. The equation of the straight line joining the origin to the point of intersection of _____ and _____ is _____ [MP PET 2001]
- (a) (b)
- (c) (d)
79. The equation of line perpendicular to _____ is _____ [RPET 2001]
- (a) (b)
- (c) (d) None of these
80. A line AB makes zero intercepts on x -axis and y -axis and it is perpendicular to another line CD , _____ The equation of line AB is _____ [Karnataka CET 2001]
- (a) (b)
- (c) (d)
81. The equation of straight line passing through point of intersection of the straight lines _____ and _____ and having infinite slope is [UPSEAT 2001]
- (a) (b)
- (c) (d)
82. The equation of the straight line which is perpendicular to _____ and passes through $(3, 2)$ is _____ [MP PET 2002]
- (a) (b)
- (c) (d)
83. Equation to the straight line cutting off an intercept 2 from the negative direction of the axis of y and inclined at 30° to the positive direction of axis of x , is [MP PET 2003]
- (a) (b)
- (c) (d)
84. The line passing through _____ and perpendicular to _____ is _____ [EAMCET 2003]
- (a) (b)
- (c) (d)
85. The equation of the line bisecting perpendicularly the segment joining the points $(-4, 6)$ and $(8, 8)$ is _____ [Karnataka CET 2003]
- (a) (b)
- (c) (d)
86. Equation of a line passing through $(1, -2)$ and perpendicular to the line _____ is _____ [RPET 2003]
- (a) (b)
- (c) (d)
87. If the line _____ passes through the points $(2, -3)$ and $(4, -5)$, then _____ = _____
- (a) $(1, 1)$ (b) $(-1, 1)$
- (c) $(1, -1)$ (d) $(-1, -1)$
88. If the slope of a line passing through the point $A(3, 2)$ be $3/4$, then the points on the line which are 5 units away from A , are [IIT 1965]
- (a) $(5, 5), (-1, -1)$ (b) $(7, 5), (-1, -1)$
- (c) $(5, 7), (-1, -1)$ (d) $(7, 5), (1, 1)$
89. For the lines _____ and _____ which of the following statement is true
- (a) Lines are parallel (b) Lines are coincident
- (c) Lines are intersecting (d) Lines are perpendicular
90. The opposite angular points of a square are _____ and _____. Then the co-ordinates of other two points are [Roorkee 1985]
- (a) (b)
- (c) (d) None of these
91. Two consecutive sides of a parallelogram are _____ and _____. If the equation to one diagonal is _____ then the equation of the other diagonal is [IIT 1970]
- (a) (b)
- (c) (d) None of these
92. One diagonal of a square is along the line _____ and one of its vertex is $(1, 2)$. Then the equation of the sides of the square passing through this vertex, are [IIT 1962]
- (a) (b)
- (c) (d) None of these
93. The opposite vertices of a square are $(1, 2)$ and $(3, 8)$, then the equation of a diagonal of the square passing through the point $(1, 2)$, is [Roorkee 1981]
- (a) (b)
- (c) (d) None of these
94. The ends of the base of an isosceles triangle are at _____ and _____. The equation of one side is _____. The equation of the other side is _____
- (a) (b)



- (c) _____ (d) _____
95. The equation of the lines on which the perpendiculars from the origin make _____ angle with x -axis and which form a triangle of area _____ with axes, are
- (a) _____ (b) _____
- (c) _____ (d) None of these
96. The base BC of a triangle ABC is bisected at the point (p, q) and the equations to the sides AB and AC are respectively _____ and _____. Then the equation to the median through A is
- (a) _____
- (b) _____
- (c) _____
- (d) None of these
97. The equation of the line which makes right angled triangle with axes whose area is 6 sq. units and whose hypotenuse is of 5 units , is
- (a) _____ (b) _____
- (c) _____ (d) _____
98. $A(-1, 1), B(5, 3)$ are opposite vertices of a square in xy -plane. The equation of the other diagonal (not passing through (A, B) of the square is given by [EAMCET 1993]
- (a) _____ (b) _____
- (c) _____ (d) _____
99. In an isosceles triangle ABC , the coordinates of the points B and C on the base BC are respectively $(1, 2)$ and $(2, 1)$. If the equation of the line AB is _____, then the equation of the line AC is [Roorkee 2000]
- (a) _____ (b) _____
- (c) _____ (d) _____
100. Equations of diagonals of square formed by lines _____ and _____ are [MP PET 1984]
- (a) _____ (b) _____
- (c) _____ (d) _____
101. The diagonal passing through origin of a quadrilateral formed by _____ and _____ is [IIT 1973]
- (a) _____ (b) _____
- (c) _____ (d) None of these
102. The vertices of a triangle OBC are _____ and _____ respectively. Then the equation of line parallel to BC which is at _____ unit distant from origin and cuts OB and OC , is [IIT 1976]
- (a) _____ (b) _____
- (c) _____ (d) None of these
103. A vertex of square is $(3, 4)$ and diagonal _____ then the second diagonal which passes through given vertex will be
- (a) _____ (b) _____
- (c) _____ (d) None of these
104. A vertex of equilateral triangle is $(2, 3)$ and equation of opposite side is _____ then the equation of one side from rest two, is [IIT 1975]
- (a) _____ (b) _____
- (c) _____ (d) None of these
105. A straight line moves so that the sum of the reciprocals of its intercepts on two perpendicular lines is constant, then the line passes through [IIT 1977]
- (a) A fixed point (b) A variable point
- (c) Origin (d) None of these
106. If a, b, c are in harmonic progression, then straight line _____ always passes through a fixed point, that point is [MP PET 1999; AIEEE 2005]
- (a) _____ (b) _____
- (c) _____ (d) _____
107. If the straight line _____ always passes through $(1, -2)$, then a, b, c are [AMU 2000]
- (a) In A.P. (b) In H.P.
- (c) In G.P. (d) None of these
108. If _____ and _____ then the curve _____ is [MNR 1987]
- (a) The same straight line u (b) Different straight line
- (c) It is not a straight line (d) None of these
109. For what values of a and b the intercepts cut off on the coordinate axes by the line _____ are equal in length but opposite in signs to those cut off by the line _____ on the axes [MP PET 1983]
- (a) _____ (b) _____
- (c) _____ (d) _____
110. If a and b are two arbitrary constants, then the straight line _____ will pass through [RPET 1990]
- (a) _____ (b) $(1, 2)$
- (c) _____ (d) $(2, 3)$



111. If $\frac{x}{a} + \frac{y}{b} = 1$ and $\frac{x}{c} + \frac{y}{d} = 1$ the lines
and
(a) Do not intersect (b) Intersect
(c) Are concurrent (d) None of these
112. The symmetry in curve $xy = c^2$ along
(a) x -axis (b) y -axis
(c) Line $y = x$ (d) Opposite quadrants
113. The point of intersection of the lines $ax + by = c$ and $bx + ay = c$
lies on the line
(a) $x + y = c$ (b) $x - y = c$
(c) $x + y = 0$ (d) All of these
114. The equations $ax + by = c$ and $bx + ay = c$
will represent the same
line, if
(a) $b = c$ (b) $c = a$
(c) $a = b$ (d) $a + b + c = 0$
(e) All the above
115. A straight line makes an angle of θ with x -axis and cuts
 y -axis at a distance of -5 from the origin. The equation of the
line is [Pb. CET 2001]
(a) $y = 5 \tan \theta$ (b) $y = -5 \tan \theta$
(c) $y = 5 \cot \theta$ (d) $y = -5 \cot \theta$
116. Equation of the straight line making equal intercepts on the axes
and passing through the point $(2, 4)$ is [Karnataka CET 2004]
(a) $x + y = 6$ (b) $x + y = 8$
(c) $x - y = 6$ (d) $x - y = 8$
117. The equation of the straight line passing through the point $(4, 3)$
and making intercepts on the co-ordinate axes whose sum is -1
is [AIIEE 2004]
(a) $x + y = 1$ and $x - y = 1$
(b) $x + y = 1$ and $x - y = -1$
(c) $x + y = -1$ and $x - y = 1$
(d) $x + y = -1$ and $x - y = -1$
118. The line which is parallel to x -axis and crosses the curve
 $y = x^2 - 4x + 4$ at an angle of 45° is equal to [Pb. CET 2002]
(a) $y = 0$ (b) $y = 2$
(c) $y = 4$ (d) $y = 6$
119. The equation of the line perpendicular to line $3x + 4y = 12$
and passing through $(4, 3)$ is equal to [Pb. CET 2002]
(a) $4x - 3y = 12$ (b) $4x - 3y = 16$
(c) $3x + 4y = 12$ (d) $3x + 4y = 16$
- (a) $4x - 3y = 12$ (b) $4x - 3y = 16$
(c) $3x + 4y = 12$ (d) None of these
120. The points $(1, 3)$ and $(5, 1)$ are the opposite vertices of a
rectangle. The other two vertices lie on the line $x + y = c$ then
the value of c will be [Pb. CET 2003; IIT 1981]
(a) 4 (b) -4
(c) 2 (d) -2
121. The triangle PQR is inscribed in the circle $x^2 + y^2 = 25$. If Q
and R have co-ordinates $(3, 4)$ and $(-4, 3)$ respectively, then
the length of PQ is equal to [IIT Screening 2000]
(a) 5 (b) $5\sqrt{2}$
(c) $5\sqrt{5}$ (d) $5\sqrt{10}$
122. The point (t, t^2) lies on the line $2x - y = 3$ for
(a) All real values of t (b) Some real values of t
(c) No real values of t (d) None of these
123. The line joining the points $(-1, 3)$ and $(4, -2)$ will pass through the
point (p, q) if
(a) $p + q = 1$ (b) $p + q = 2$
(c) $p + q = 3$ (d) $p + q = 4$
124. The line parallel to the x -axis and passing through the intersection
of the lines $2x + 3y = 12$ and $3x + 2y = 12$, where
the line is [AIIEE 2005]
(a) Above the x -axis at a distance of $3/2$ from it
(b) Above the x -axis at a distance of $2/3$ from it
(c) Below the x -axis at a distance of $3/2$ from it
(d) Below the x -axis at a distance of $2/3$ from it
125. Two points $(a, 0)$ and $(0, b)$ are joined by a straight line. Another
point on this line is [Orissa JEE 2005]
(a) $(\frac{a}{2}, \frac{b}{2})$ (b) $(\frac{a}{3}, \frac{b}{3})$
(c) $(\frac{a}{4}, \frac{b}{4})$ (d) $(\frac{a}{5}, \frac{b}{5})$
126. The equation to the line bisecting the join of $(3, -4)$ and $(5, 2)$
and having its intercepts on the x -axis and the y -axis in the ratio 2
 $: 1$ is [Karnataka CET 2005]
(a) $3x + 4y = 12$ (b) $3x + 4y = 16$
(c) $4x + 3y = 12$ (d) $4x + 3y = 16$
127. If the co-ordinates of the points A and B be $(1, 0)$ and $(0, 1)$,
then the angle made by the line AB with x -axis is
(a) 45° (b) 30°
(c) 60° (d) 75°
128. The line $ax + by = c$ will be parallel to x -axis, if
(a) $a = 0$ (b) $b = 0$
(c) $c = 0$ (d) $a = b = c = 0$



129. A line passing through origin and is perpendicular to two given lines and , then the ratio in which the origin divides this line is [DCE2005]
 (a) 1 : 2 (b) 2 : 1
 (c) 4 : 3 (d) 3 : 4

Angle between two straight lines, Bisector of angle between two lines

1. The acute angle between the lines and is [RPET 1984, 87, 88]
 (a) (b)
 (c) (d)
2. The angle between the lines and is [MP PET 1997]
 (a) (b)
 (c) (d)
3. The angle between the lines whose intercepts on the axes are a , $-b$ and b , $-a$ respectively, is
 (a) (b)
 (c) (d) None of these
4. If the coordinates of the vertices A, B, C of the triangle ABC be and respectively, then =
 (a) (b)
 (c) (d)
5. Angle between the lines and is [MP PET 1995]
 (a) (b)
 (c) (d) None of these
6. If the lines and are equally inclined to the line then $m =$ [ISMDhanbad 1976]
 (a) (b)
 (c) (d)
7. The angle between the lines and is
 (a) (b)

- (c) (d)
8. The angle between the lines and is
 (a) (b)
 (c) (d) None of these
9. The angle between the two lines and is [RPET 1981, 85, 86; MP PET 1984]
 (a) (b)
 (c) (d)
10. If then lines and are [MP PET 1984]
 (a) Parallel
 (b) Inclined at to each other
 (c) Perpendicular to each other
 (d) Inclined at to each other
11. To which of the following types the straight lines represented by and belong [MP PET 1982]
 (a) Parallel to each other
 (b) Perpendicular to each other
 (c) Inclined at to each other
 (d) Coincident pair of straight lines
12. The obtuse angle between the lines and is [RPET 1984]
 (a) (b)
 (c) (d)
13. The line passes through $(1, 0)$ and makes an angle of with x -axis [RPET 1985]
 (a) (b)
 (c) (d)
14. Angle between and is [MNR 1988]
 (a) (b)
 (c) (d) None of these
15. If the lines and are inclined at an angle to each other, then the value of k will be
 (a) 1 (b) 2
 (c) -1 (d) -2
16. A straight line makes an angle with another straight line which passes through origin. Then the equation of the line is



- (a) (b)
(c) (d)
17. The angle between the lines and is [MP PET 1994]
(a) (b)
(c) (d)
18. The inclination of the straight line passing through the point $(-3, 6)$ and the midpoint of the line joining the point $(4, -5)$ and $(-2, 9)$ is [Kerala (Engg.) 2002]
(a) (b)
(c) (d)
19. The angle between the lines and is [Kerala (Engg.) 2002]
(a) (b)
(c) (d)
20. The angle between the straight lines and is [MP PET 2003]
(a) (b)
(c) (d)
21. Angle between the lines and is [RPET 2003]
(a) (b)
(c) (d)
22. The angle between the lines is equal to [Pb. CET 2003]
(a) (b)
(c) (d)
23. The line passing through the points $(3, -4)$ and $(-2, 6)$ and a line passing through $(-3, 6)$ and $(9, -18)$ are [AMU 1974]
(a) Perpendicular
(b) Parallel
(c) Makes an angle with each other
(d) None of these
24. If the line and are mutually perpendicular, then the value of a will be [MNR 1975]
(a) (b) 2
(c) (d) None of these
25. A straight line through origin bisect the line passing through the given points and , then the lines are
(a) Perpendicular (b) Parallel
(c) Angle between them is (d) None of these
26. The lines and are perpendicular to each other, if [MP PET 1996]
(a) (b)
(c) (d)
27. The lines and are [MP PET 1993]
(a) Parallel (b) Perpendicular
(c) Equally inclined to axes (d) Coincident
28. If the line passing through $(4, 3)$ and $(2, k)$ is perpendicular to , then $k =$ [RPET 1985; MP PET 1999]
(a) -1 (b) 1
(c) -4 (d) 4
29. The number of straight lines which is equally inclined to both the axes is [RPET 2002]
(a) 4 (b) 2
(c) 3 (d) 1
30. The equation of the bisector of the acute angle between the lines and is [IIT 1975, 1983; RPET 2003; UPSEAT 2004]
(a) (b)
(c) (d)
31. The equation of the line which bisects the obtuse angle between the lines and , is [IIT 1979]
(a)
(b)
(c)
(d) None of these
32. Equation of angle bisectors between x and y -axes are [MP PET 1984]
(a) (b)
(c) (d)
33. The equation of the bisector of that angle between the lines , which contains the point $(1, -3)$ is
(a) (b)
(c) and (d) None of these
34. Equation of angle bisector between the lines and are [RPET 1995]
(a)
(b)
(c)
(d) None of these



35. The bisector of the acute angle formed between the lines and has the equation [Pb. CET 2004]
- (a) (b)
(c) (d)
36. If vertices of a parallelogram are respectively (0, 0), (1, 0), (2, 2) and (1, 2), then angle between diagonals is [RPET 1996]
- (a) (b)
(c) (d)
37. Let and be three points. Then the equation of the bisector of the angle PQR is [IIT Screening 2002]
- (a) (b)
(c) (d)

Distance between two lines, Perpendicular distance of the line from a point, Position of point w.r.t. line

1. The points on the x -axis whose perpendicular distance from the line is a , are [RPET 2001; MP PET 2003]
- (a) (b)
(c) (d) None of these
2. The length of the perpendicular from the point to the line, is
- (a) (b)
(c) (d) None of these
3. The distance between the lines and is [MNR 1982; RPET 1995; MP PET 2002]
- (a) $3/2$ (b) $3/10$
(c) 6 (d) None of these
4. The distance of the point of intersection of the lines and from the line is
- (a) (b)

- (c) (d) None of these
5. The point on the line which lie at a unit distance from the line, are [IIT 1976]
- (a) (b)
(c) (d)
6. If the length of the perpendicular drawn from the origin to the line whose intercepts on the axes are a and b be p , then [Karnataka CET 2003]
- (a) (b)
(c) (d)
7. The length of perpendicular drawn from origin on the line joining and, is
- (a) (b)
(c) (d)
8. If p and be the distances of origin from the lines and, then =
- (a) k (b)
(c) (d)
9. The perpendicular distance of the straight line from the origin is given by [MP PET 1993]
- (a) (b)
(c) (d)
10. The length of perpendicular from (3, 1) on line, is [RPET 1989; MP PET 1984]
- (a) 6 (b) 7
(c) 5 (d) 8
11. The distance between two parallel lines and, is given by [MP PET 1984]
- (a) 4 (b) 5
(c) 3 (d) 1
12. The distance between and, is [AMU 1979; MNR 1987; UPSEAT 2000]
- (a) (b) 4
(c) (d) None of these



13. The vertex of an equilateral triangle is $(2, -1)$ and the equation of its base is $x + y = 1$. The length of its sides is

[UPSEAT 2003]

- (a) $\frac{2\sqrt{3}}{3}$ (b) $\frac{2\sqrt{3}}{5}$
(c) $\frac{2\sqrt{3}}{7}$ (d) $\frac{2\sqrt{3}}{9}$
14. The product of the perpendiculars drawn from the points $(1, 2)$ and $(3, 4)$ on the line $3x + 4y = 10$, is
- (a) $\frac{1}{5}$ (b) $\frac{1}{10}$
(c) $\frac{1}{15}$ (d) $\frac{1}{20}$