Mathematics II Midterm Exam. (B)

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Complete the following

(1) The locus of a point P(x, y) which moves such that its distance from (2, 0) is equal to the

distance from the y-axis is ……………………………………………………………….

(2) When the axis transfers at the point of intersection of the two lines

$3x^2 + 2xy - y^2 - 14x - 2y + 15 = 0$ its equation becomes …………………………..

(3) When the axis rotates by an angle 45° the equation $xy = 4$ becomes

………………………………………………………………………………………………..………

(4) The equation of the circle which center at (5, 4) and touch the y- axis is

………………………………………………………………………………………………

(5) The angle between the lines $2x^2 - 3xy - 2y^2 + x - 2y + 5 = 0$ is……………………………

(6) The curve $r = 2a\ sin\theta$ is symmetric about …………………………………………………………

(7) The equation of bisectors for the angle between the lines $2x^2 - 3xy - 2y^2 = 0$ is

………………………………………………………………………………………………………

(8) The equation $r^2 = a^2\ cos\theta\ sin\theta$ transform to Cartesian coordinates becomes

………………………………………………………………………………………………………

(9) The area of the triangle inscribed by the axis and the line 5x+4y=20 is……………………

(10) The center of the circle $x^2 + y^2 - 4x - 6y - 3 = 0$ at ………………… its radius=…………….

(11) If the equation of a circle is $2x^2 + 2y^2 + \lambda xy + (\lambda - 4)x + 6y - 5 = 0$ then its radius

is……………………………………………………………………………………………………...

(12) The equation of the circle whose one diameter is PQ, where P(3,-3), Q(-3,3) is

…………………………………………………………………………………………………