Roll No:							

PADRE CONCEIÇÃO COLLEGE OF ENGINEERING, VERNA-GOA

TUTORIAL NO: 2

Semester: II (RC 2019-'20) **Course:** FE210
Course Instructor: Ms. Komal Paroolkar/ Dr. A.K.Handa Mathematics-II

Topic: Rectification of curves in Cartesian and Polar coordinates

		CO	CL
Q1.	Find the perimeter of the asteroid $x^{2/3} + y^{2/3} = 4$.	**FE210.1**	**CL3**
Q2.	Find the length of the loop of the curve $6y^2 = x(x-2)^2$	**FE210.1**	**CL3**
Q3.	Find the length of $y = 2\,x^{2/3} + 1; 1 \le x \le 3$.	**FE210.1**	**CL3**
Q4.	Find the length of the curve $y = \frac{1}{3}(x^2+2)^{3/2}$ measured from $x = 0\ to\ x = 3$.	**FE210.1**	**CL3**
Q5.	Find the length of the loop of the curve $9y^2 = (x-2)(x-5)^2$	**FE210.1**	**CL3**
Q6.	Find the length of the loop of the curve $3ax^2 = y(y-a)^2$.	**FE210.1**	**CL3**
Q7.	Find the length of the loop of the curve $9x^2 = (y+7)(y+4)^2$.	**FE210.1**	**CL3**
Q8.	Find the length of the curve $y = \frac{1}{6}(x^2+4)^{3/2}$ for $0 \le x \le 3$.	**FE210.1**	**CL3**
Q9.	Find the length of the loop of the curve $9y^2 = (x-2)(x-5)^2$	**FE210.1**	**CL3**

Q10. Find the perimeter of $r = a\,(1 - \sin\theta)$ **FE210.1 CL3**

Q11. Find the length of **FE210.1 CL3**

$$r = a\,(1 + \cos\theta)\ \ lying\ inside\ r = a$$

Find the length of $r = a(1 + \cos\theta)$ lying inside $r = 3cos\theta$.

Q12. Find the perimeter of $r = a(1 + \cos\theta)$ **FE210.1 CL3**

Q13. Find the perimeter of $r = a(1 + \sin\theta)$ **FE210.1 CL3**