

8.5.1

Qut 5

①

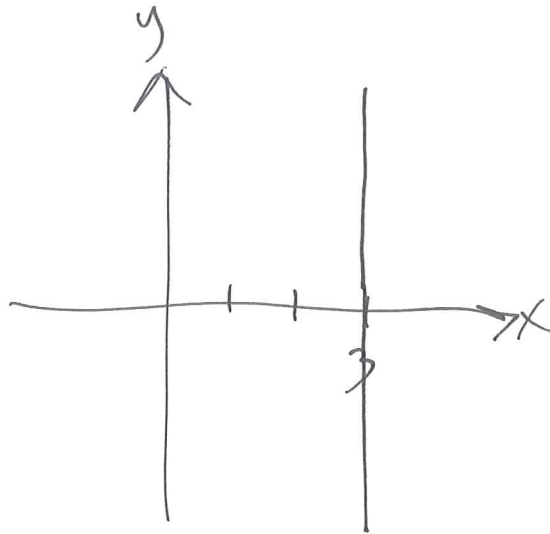
~~$r = 3 \cdot \sec \theta$~~

$$r = 3 \cdot \sec \theta$$

$$r = \frac{3}{\cos \theta}$$

$$r \cdot \cos \theta = 3$$

$$x = 3$$



8.5.3

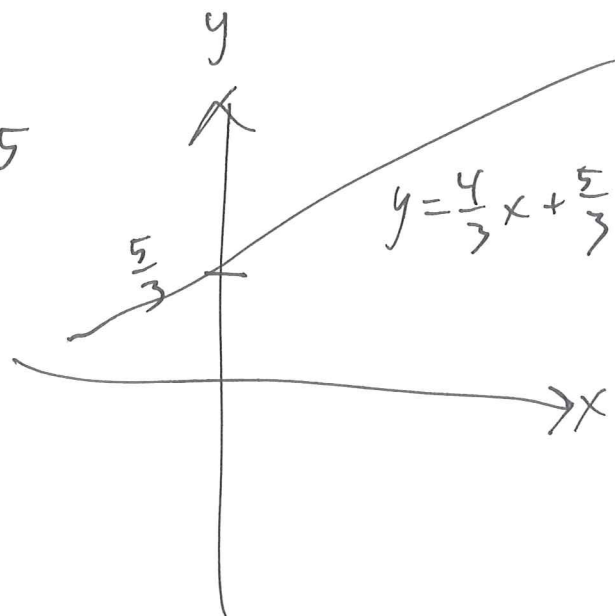
$$r = \frac{5}{3 \sin \theta - 4 \cos \theta}$$

$$3r \sin \theta - 4r \cos \theta = 5$$

$$3y - 4x = 5$$

$$3y = 4x + 5$$

$$y = \frac{4}{3}x + \frac{5}{3}$$



8.5.4

Qut 5 (2)

$$r = \sin \theta + \cos \theta$$

$$r^2 = r \cdot \sin \theta + r \cdot \cos \theta$$

$$x^2 + y^2 = y + x$$

$$x^2 - x + y^2 - y = 0$$

$$\left(x + \frac{(-1)}{2 \cdot 1}\right)^2 - \frac{(-1)^2}{4 \cdot 1} + \left(y + \frac{(-1)}{2 \cdot 1}\right)^2 - \frac{(-1)^2}{4 \cdot 1} = 0$$

$$\left(x - \frac{1}{2}\right)^2 + \left(y - \frac{1}{2}\right)^2 = \frac{1}{2} = \left(\sqrt{\frac{1}{2}}\right)^2$$

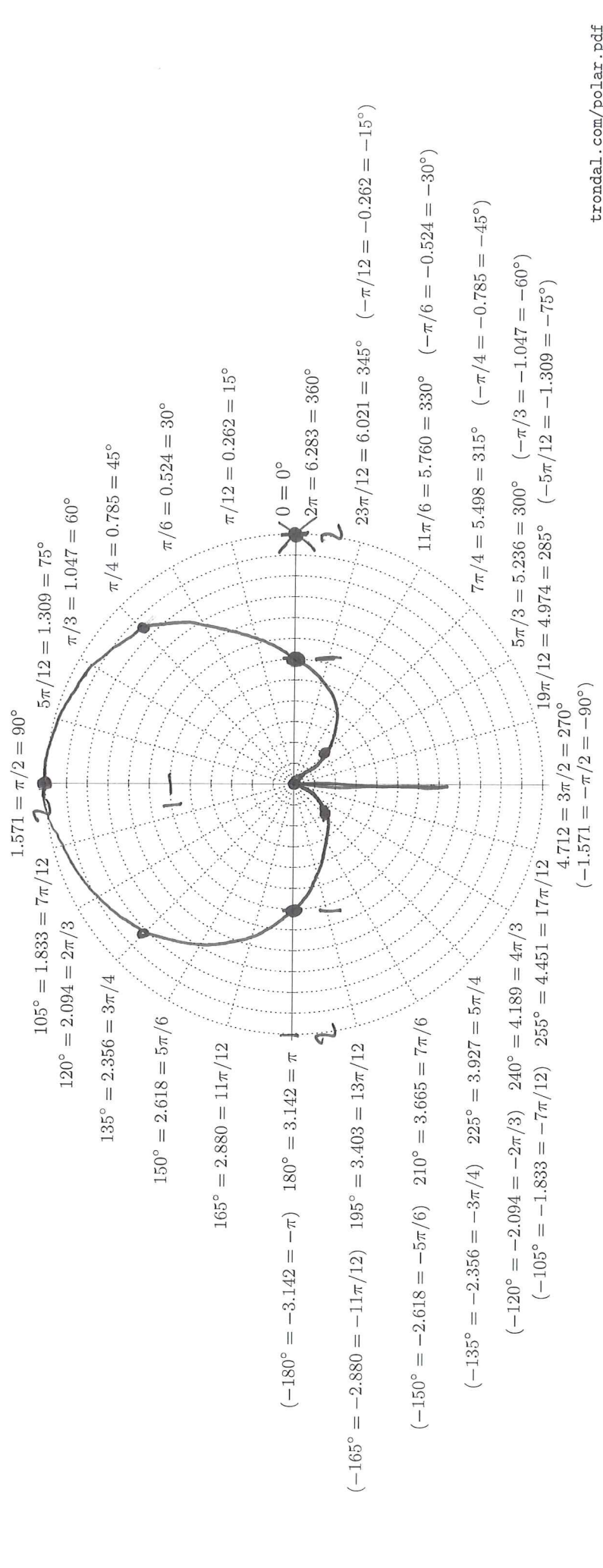
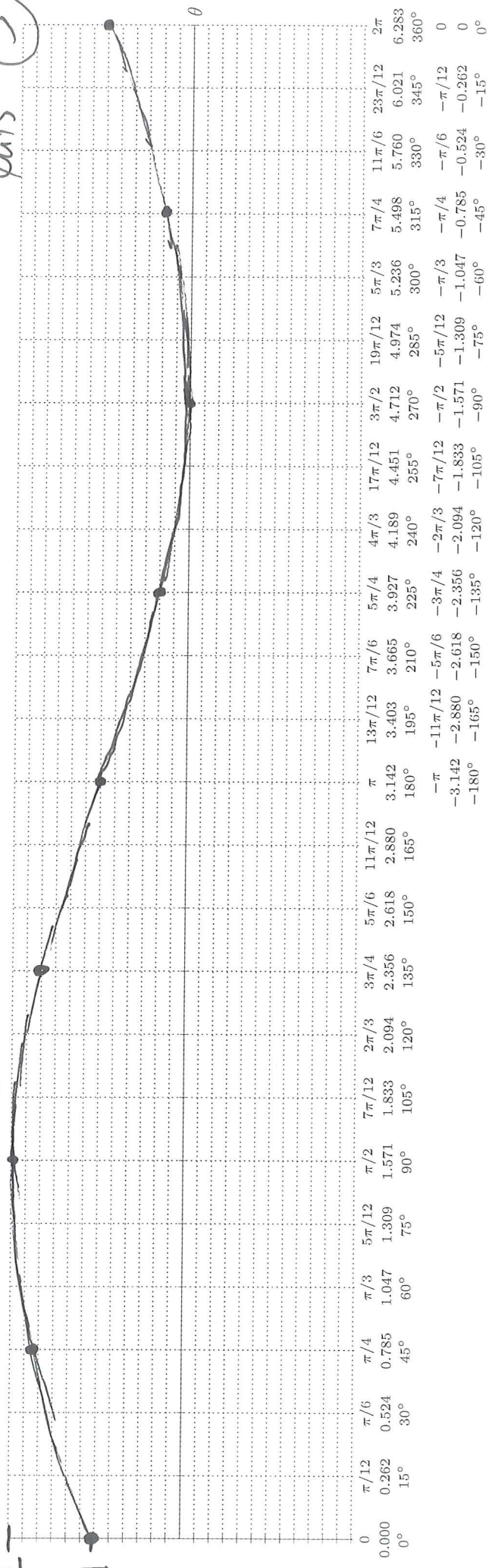
$$ax^2 + bx + c = a \left(x + \frac{b}{2a}\right)^2 - \frac{b^2}{4a} + c$$

8.5.13  
2  
1

$r=0 \Rightarrow 1 + \sin\theta = 0 \Rightarrow \sin\theta = -1$

$r = 1 + \sin\theta$

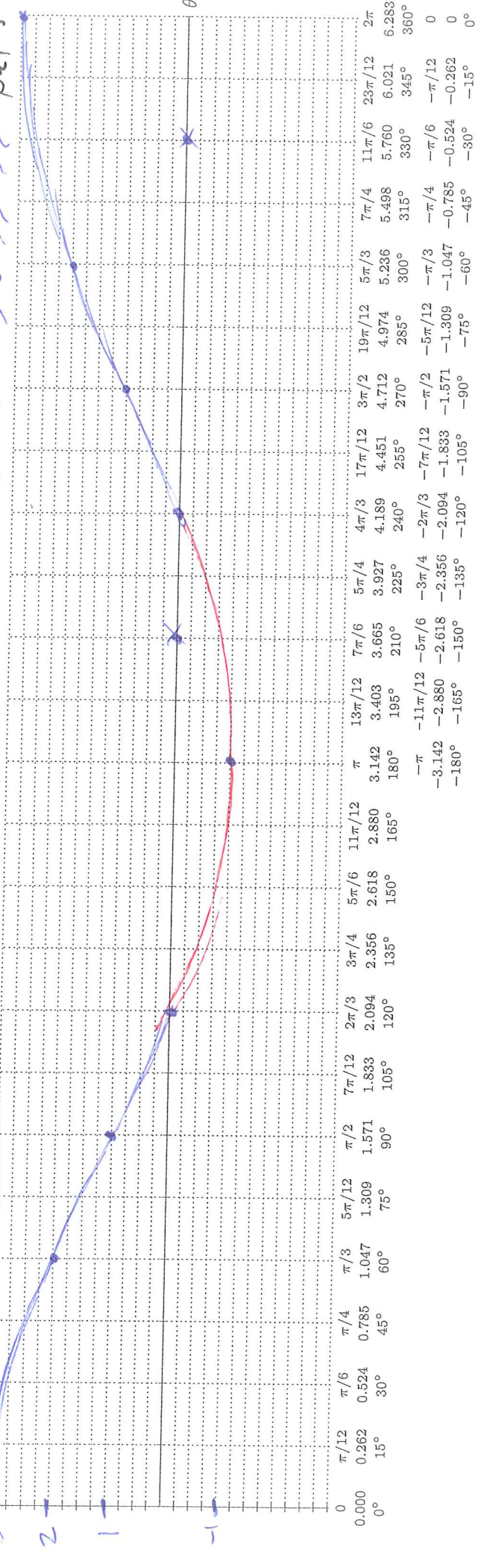
Qnts 3





8.5.15

$r = 1 + 2 \cos \theta$   
 $r = 0 \Rightarrow 1 + 2 \cos \theta = 0 \Rightarrow \cos \theta = -\frac{1}{2} \Rightarrow \theta = \left\{ \frac{2\pi}{3}, \frac{4\pi}{3} \right\}$  plus 5



$\theta$	$r$	$\theta$	$r$
0	0.262	$\pi$	-3.142
$15^\circ$	0.524	$135^\circ$	-2.880
$30^\circ$	0.785	$150^\circ$	-2.618
$45^\circ$	1.047	$165^\circ$	-2.880
$60^\circ$	1.309	$180^\circ$	-3.142
$75^\circ$	1.571	$195^\circ$	-2.880
$90^\circ$	1.833	$210^\circ$	-2.618
$105^\circ$	2.094	$225^\circ$	-2.356
$120^\circ$	2.356	$240^\circ$	-2.094
$135^\circ$	2.618	$255^\circ$	-1.833
$150^\circ$	2.880	$270^\circ$	-1.571
$165^\circ$	3.142	$285^\circ$	-1.309
$180^\circ$	3.403	$300^\circ$	-1.047
$195^\circ$	3.665	$315^\circ$	-0.785
$210^\circ$	3.927	$330^\circ$	-0.524
$225^\circ$	4.189	$345^\circ$	-0.262
$240^\circ$	4.451	$360^\circ$	0
$255^\circ$	4.712		
$270^\circ$	4.974		
$285^\circ$	5.236		
$300^\circ$	5.498		
$315^\circ$	5.760		
$330^\circ$	6.021		
$345^\circ$	6.283		
$360^\circ$	6.545		

