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Computer Graphics

Ans 2 Mid-point Circle theorem

→ $P_0 = 1 - r$

→ $P_k < 0$ (x_{k+1}, y_k)

$P_{k+1} = P_k + 2(x_k + 1) + 1$

→ $P_k > 0$ (x_{k+1}, y_{k-1})

$P_{k+1} = P_k + 2(x_k + 1) - 2y_{k+1} + 1$

Radius = 9

$P_0 = 1 - r$

$P_0 = -8$

$P_1 = -8 + 2 + 1$

$= -5$

~~$P_2 = -5 + 8 + 1$~~

$P_3 = -6 + 4 + 1$

$= -1$

$P_4 = -1 + 6 + 1$

$= 6$

$P_5 = 6 + 8 - 14 + 1$

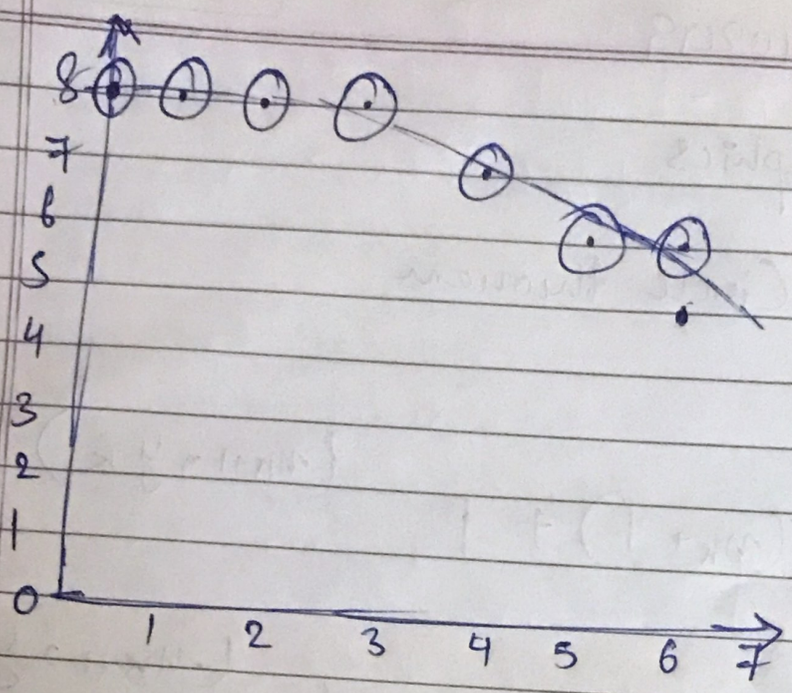
$= 1$

$P_5 = 1 + 10 - 12 + 1$

$= 0$

(0, 8)

k	P_k	(x_{k+1}, y_{k-1})	$2x_{k+1}$	$2y_{k-1}$
0	-8	(1, 8)	1	16
1	-5	(2, 8)	4	16
2	-1	(3, 8)	6	16
3	6	(4, 7)	8	14
4	1	(5, 6)	10	12
5	0	(6, 6)	12	12


8
7
6
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