

Computer Graphics

Ans 2) Mid point Circle Theorem

$$P_0 = 1 - r$$

$$P_k \leq 0$$

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

$$P_k > 0$$

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

$$\text{radius} = 9$$

$$P_0 = 1 - 8$$

$$P_0 = -8$$

$$P_1 = -8 + 2 + 1$$

$$= -6$$

$$P_2 = -6 + 8 - 14 + 1$$

$$= 1$$

$$P_3 = -1 + 6 + 1$$

$$= -1$$

$$P_4 = -1 + 6 + 1$$

$$= 6$$

$$P_5 = 1 + 10 - 12 + 1$$

$$= 0$$

k	p_k	M_{k+1}, y_{k+1}	$2m_{k+1}$	$2y_k - 1$
0	-8	(1, 8)	1	16
1	-6	(2, 8)	4	16
2	-1	(3, 8)	6	16
3	6	(4, 7)	8	14
4	1	(5, 7)	10	12
5	1	(5, 6)	10	12
6	0	(6, 6)	12	12

