

CS402: Computer Graphics

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Circle Drawing Algorithms

1 Draw a circle from (0,0) with a radius equal to 15

$$p_0 = 1 - r = 1 - 15 = -14$$

k	p_k	plot	$2x_{k+1}$	$2y_{k+1}$	
0	-14	(1,15)	2	30	$p_1 = -14 + 2 + 1 = -11$
1	-11	(2,15)	4	30	$p_2 = -11 + 4 + 1 = -6$
2	-6	(3,15)	6	30	$p_3 = -6 + 6 + 1 = 1$
3	1	(4,14)	8	28	$p_4 = 1 + 8 + 1 - 28 = -20$
4	-20	(5,14)	10	28	$p_5 = -20 + 10 + 1 = -9$
5	-9	(6,14)	12	28	$p_6 = -9 + 12 + 1 = 4$
6	4	(7,13)	14	26	$p_7 = 4 + 14 + 1 - 26 = -11$
7	-7	(8,13)	16	26	$p_8 = -7 + 16 + 1 = 10$
8	10	(9,12)	18	24	$p_9 = 10 + 18 + 1 - 24 = 5$
9	5	(10,11)	20	22	$p_{10} = 5 + 20 + 1 - 22 = 4$
10	4	(11,10)			

