Y axis

Y a a

X axis

Q8

-1 < m < 0

Q7

m < -1

Q6

m > 1

Q5

0 < m < 1

Q4

-1 < m < 0

Q3

m < -1

Q2

m > 1

Q1 octant

0 < m < 1

For Q1, Q4, Q5, Q8:

* x is increased by 1 step each time.
* P0 = 2 \* |dy| - |dx|
* Pi+1 = Pi + 2 |dy| if Pi < 0

= Pi + 2 |dy| - 2 |dx| if Pi > 0

For Q2, Q3, Q4, Q7:

* x is increased by 1 step each time.
* P0 = 2 \* |dx| - |dy|
* Pi+1 = Pi + 2 |dx| if Pi < 0

= Pi + 2 |dx| - 2 |dy| if Pi > 0