① $f(x+h) \approx f(x) + hf'(x)$

$h = 1$ $\quad f'(x) \approx f(x+1) - f(x)$

② $f(x-h) \approx f(x) - hf'(x)$

① - ② $\Rightarrow$ $f'(x) \approx \dfrac{f(x+1) - f(x-1)}{2}$

$$\nabla^2 f(i,j) = f(i,j-1) + f(i,j+1)$$
$$+ f(i-1,j) + f(i+1,j)$$
$$- 4 f(i,j)$$

0	1	0
1	-4	1
0	1	0

$$f'(x) \simeq \frac{f(x+1) - f(x-1)}{2}$$

h_x

$-\frac{1}{2}$	0	$\frac{1}{2}$

h_y

$\frac{1}{2}$
0
$-\frac{1}{2}$

3X1

0	0	2	3	1
8	8	5	7	4
1	1	2	5	3

1	1.5	-0.5	-1
-1.5	-0.5	-0.5	-1.5
	2		

X

4			
-5	0	1	
	-1.5		

Y

Arctan(-0.5, 0) = 0

$$f(x)' = (f(x+1) - f(x-1)) / 2 = [-.5, .0, .5]*[f(x-1), f(x), f(x+1)]$$