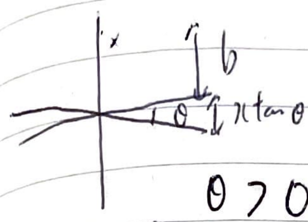
$D_x f_{ib} \neq 0$

~~Shortest Dist Line~~

No.

Date. 7 · 7 · 2017

there is one more condition on the range ~~test~~ of integration.



$b + x\tan\theta \le 2h$ $\qquad b \pm \frac{1}{2}h + x\tan\theta \le 2h$

$\theta > 0$ (clockwise) $\qquad b + x\tan\theta = 2h$ $\qquad b \pm \frac{1}{2}h + x\tan\theta = 2h$

$$x = \frac{2h - b}{\tan\theta} = x' \qquad x'' = \frac{2h \mp \frac{1}{2}h - b}{\tan\theta}$$

$\alpha_1 = 0$

for $(a+\frac{h}{2}, b)$, if $x' < a + \frac{5}{2}h$, $\alpha_1 = x'$, if $x' < a - \frac{3}{2}h$, $\beta_1 = 0$

$\alpha_2 = 0$

for $(a-\frac{h}{2}, b)$, if $x' < a + \frac{3}{2}h$, $\alpha_2 = x'$, if $x' < a - \frac{5}{2}h$, $\beta_2 = 0$

$\delta_1 = 0$

for $(a, b+\frac{h}{2})$, if $x'' < a + 2h$, $\delta_1 = x''$, if $x'' < a - 2h$, $\gamma_1 = 0$

$\delta_2 = 0$

for $(a, b-\frac{h}{2})$, if $x'' < a + 2h$, $\delta_2 = x''$, if $x'' < a - 2h$, $\gamma_2 = 0$

$|b + x\tan\theta| \le 2h$ $\qquad |b \pm \frac{1}{2}h + x\tan\theta| \le 2h$

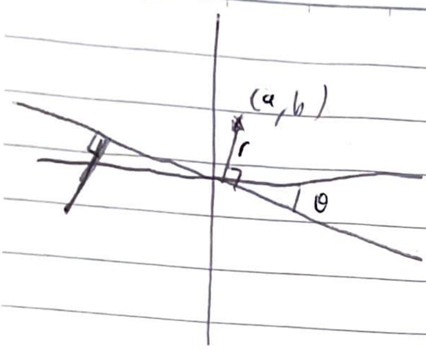
$-2h \le b + x\tan\theta \le 2h$ $\qquad -2h \le b \pm \frac{1}{2}h + x\tan\theta \le 2h$

$\frac{-b-2h}{\tan\theta} \le x \le \frac{-b+2h}{\tan\theta}$ $\qquad \frac{-b-2h\mp\frac{1}{2}h}{\tan\theta} \le x \le \frac{-b+2h\mp\frac{1}{2}h}{\tan\theta}$

No.

Date. 12 · 7 · 2017

$\partial x \, f_{ib} \neq 0$



small angle θ

$$H = \frac{1}{4h}\left(x + 2h + \frac{2h}{\pi}\sin\frac{\pi x}{2h}\right)$$

~~shortest distance to line:~~

$y = -x\tan\theta$, θ is positive clockwise

$$y - b = \frac{1}{\tan\theta}(x - a)$$

$$-x\tan\theta = \frac{1}{\tan\theta}(x-a) + b$$

$$(1+\tan^2\theta)x - a + b\tan\theta = 0$$

$$x = (a - b\tan\theta)\cos^2\theta$$

$$y = (b\tan\theta - a)\sin\theta\cos\theta$$

$$r = \sqrt{(a - (a-b\tan\theta)\cos^2\theta)^2 + (b - (b\tan\theta - a)\sin\theta\cos\theta)^2}$$

$\cancel{f_y\left(a + \tfrac{1}{2}h,\ b\right) =}$