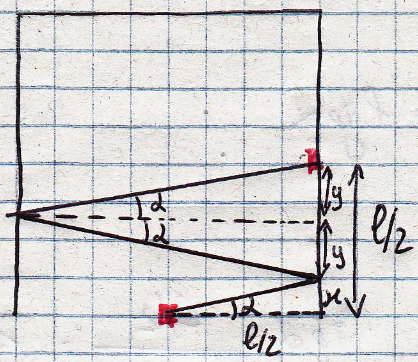
1° CASO



1) $\boxed{\alpha = 45^\circ}$

2) $\frac{l}{2} = x + 2y$

$x = \frac{l}{2} \operatorname{tg} \alpha$

$y = l \operatorname{tg} \alpha$

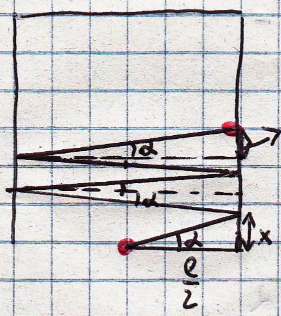
quindi $\frac{l}{2} = \frac{l}{2} \operatorname{tg} \alpha + 2 l \operatorname{tg} \alpha$

$\operatorname{tg} \alpha \left(\frac{l}{2} + 2l \right) = \frac{l}{2}$

$\operatorname{tg} \alpha = \frac{\frac{1}{2}}{\frac{5}{2}} = \frac{1}{5}$

$\boxed{\operatorname{tg} \alpha = \frac{1}{5}}$

3)



$x = \frac{l}{2} \operatorname{tg} \alpha$

$y = l \operatorname{tg} \alpha$

$\frac{l}{2} = x + 4y$

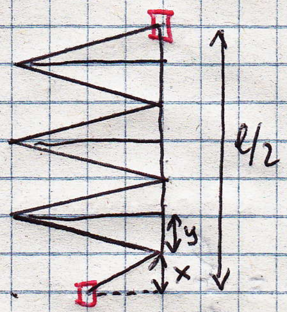
$\frac{l}{2} = \frac{l}{2} \operatorname{tg} \alpha + 4 l \operatorname{tg} \alpha$

$\operatorname{tg} \alpha = l/2 \big/ \left(\frac{l}{2} + 4l \right)$

$\operatorname{tg} \alpha = \frac{1/2}{\frac{9}{2}} = \frac{1}{9}$

$\boxed{\operatorname{tg} \alpha = \frac{1}{9}}$

4)



$\frac{l}{2} = \frac{l}{2} \operatorname{tg} \alpha + 6 l \operatorname{tg} \alpha$

$\operatorname{tg} \alpha = l/2 \big/ \left(\frac{l}{2} + 6l \right)$ $\quad \operatorname{tg} \alpha = \frac{1/2}{\frac{13}{2}} = \frac{1}{13}$

$\boxed{\operatorname{tg} \alpha = \frac{1}{13}}$

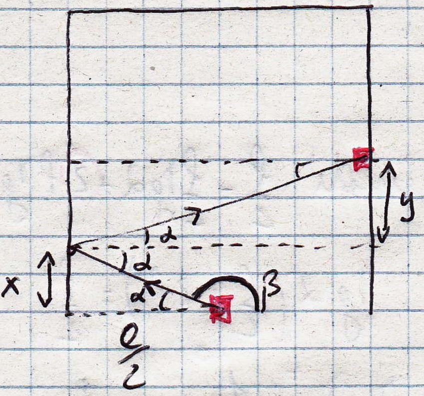
FORMULA GENERALE $\boxed{\frac{l}{2} = \frac{l}{2} \operatorname{tg} \alpha + 2n l \operatorname{tg} \alpha}$

$n \in \mathbb{N}$

n = urti sulle pareti

2° CASO

1)



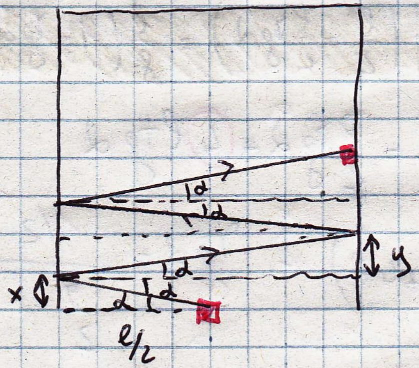
$$x = -\frac{l}{2}\,tg\,\alpha \qquad y = l\,tg\,\alpha$$

$$-\frac{l}{2}\,tg\,\alpha + l\,tg\,\alpha = \frac{l}{2}$$

$$tg\,\alpha\left(l - \frac{l}{2}\right) = \frac{l}{2} \qquad tg\,\alpha = \frac{l/2}{l/2} = 1$$

$\boxed{\alpha = 45°}$ quindi $\beta = 135°$.

2)



$$x + 3y = \frac{l}{2}$$

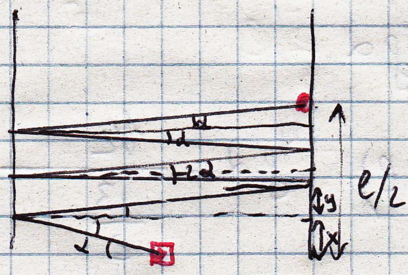
$$x = -\frac{l}{2}\,tg\,\alpha \qquad y = l\,tg\,\alpha$$

$$-\frac{l}{2}\,tg\,\alpha + 3\,l\,tg\,\alpha = \frac{l}{2}$$

$$tg\,\alpha\left(3l - \frac{l}{2}\right) = \frac{l}{2} \qquad tg\,\alpha = \frac{\frac{1}{2}}{\frac{5}{2}} = \frac{1}{5}$$

$$\boxed{tg\,\alpha = \frac{1}{5}}$$

3)



$$\frac{l}{2} = x + 5y$$

$$-\frac{l}{2}\,tg\,\alpha + 5\,l\,tg\,\alpha = \frac{l}{2}$$

$$tg\,\alpha\left(5l - \frac{l}{2}\right) = \frac{l}{2} \qquad tg\,\alpha = \frac{\frac{1}{2}}{\frac{9}{2}} = \frac{1}{9}$$

$$\boxed{tg\,\alpha = \frac{1}{9}}$$

FORMULA GENERALE

$$-\frac{l}{2}\,tg\,\alpha + (2n+1)\,l\,tg\,\alpha = \frac{l}{2} \qquad n \in \mathbb{N}$$