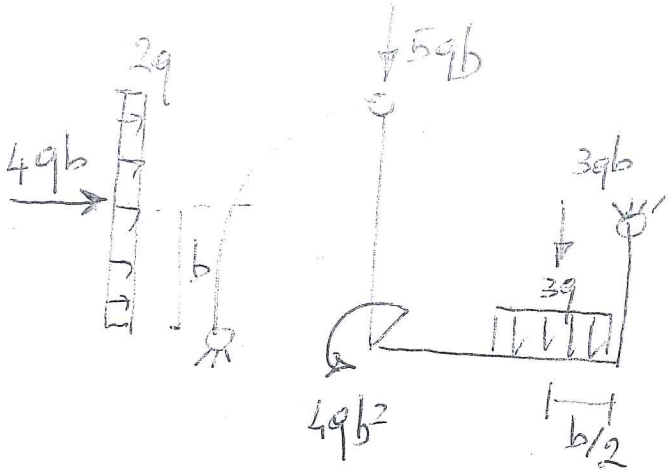
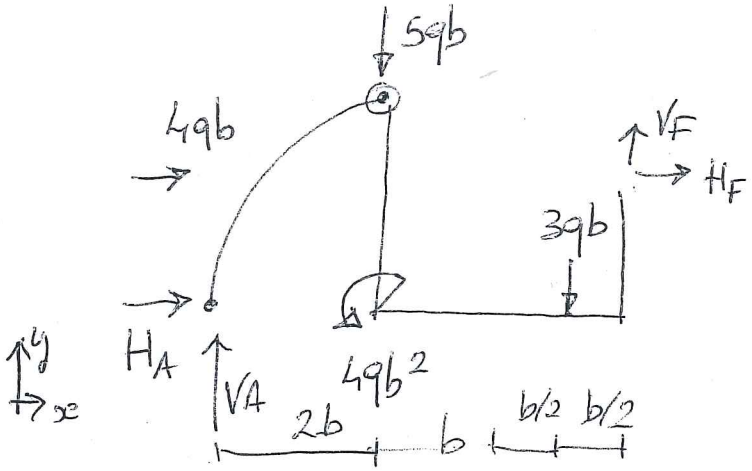
$3b + \frac{b}{2} - \frac{7}{2}b$





$\circlearrowleft M_{Z(F)} = 0$

$H_A \cdot b - V_A \cdot 4b + 10qb^2 + 4qb^2 + \frac{3}{2}qb^2 = 0$

$H_A \cdot b - 4V_A \cdot b + \frac{31}{2}qb^2 = 0$

$\rightarrow R_x = 0 \quad H_A + 4qb + H_F = 0$

$\uparrow R_y = 0 \quad V_A - 5qb - 3qb + V_F = 0$

$\left[\circlearrowleft M_{Z(A)} = 0 \quad -4qb^2 - 10qb^2 + 4qb^2 - 3qb \cdot \frac{7}{2}b + V_F \cdot 4b - H_F \cdot b = 0\right]$

eq. auxiliar

$\circlearrowleft M_{Z(B)}^{①} = 0 \quad H_A \cdot 2b - V_A \cdot 2b + 4qb^2 = 0$

[1] $H_A + H_F + 4qb = 0$

[2] $V_A + V_F - 8qb = 0$

([3] $4V_F \cdot b - H_F \cdot b - \frac{41}{2}qb^2 = 0$)

[4] $2H_A - 2V_A + 4qb = 0 \qquad H_A - V_A + 2qb = 0$

[5] $H_A - 4V_A + \frac{31}{2}qb = 0$

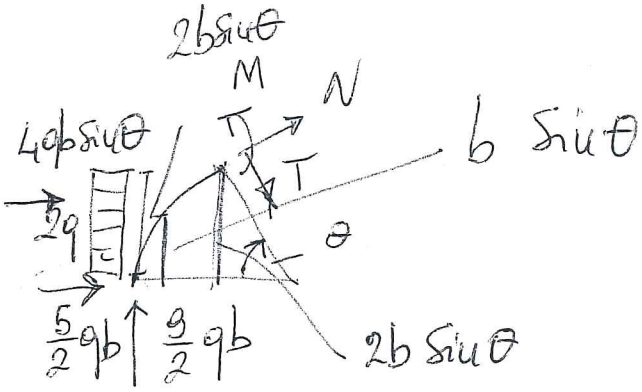
[4]-[5] $3V_A - \frac{27}{2}qb = 0$

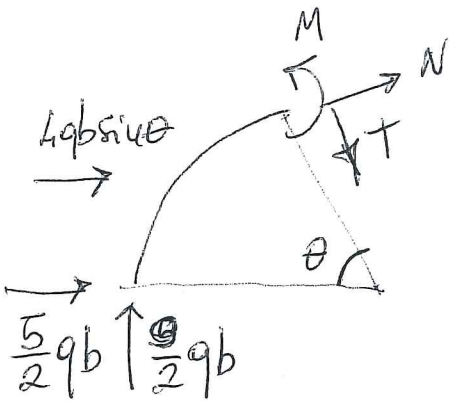
$$\boxed{V_A = \frac{9}{2}qb}$$ ✓

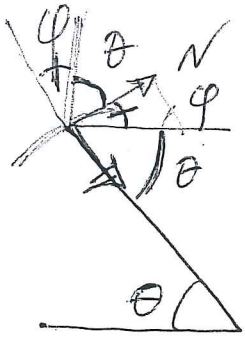
[5] $H_A = 4V_A - \frac{31}{2}qb = \frac{36}{2}qb - \frac{31}{2}qb$ $\boxed{H_A = \frac{5}{2}qb}$ ✓

[2] $V_F = 8qb - V_A = 8qb - \frac{9}{2}qb$ $\boxed{V_F = \frac{7}{2}qb}$ ✓

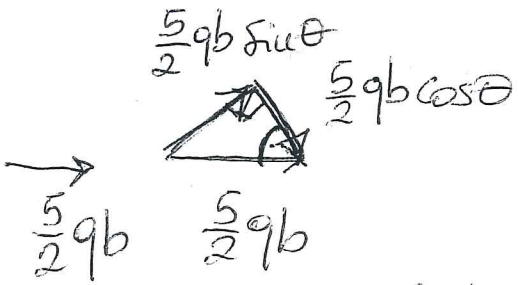
[1] $H_F = -4qb - H_A = -4qb - \frac{5}{2}qb$ $\boxed{H_F = -\frac{13}{2}qb}$ ✓

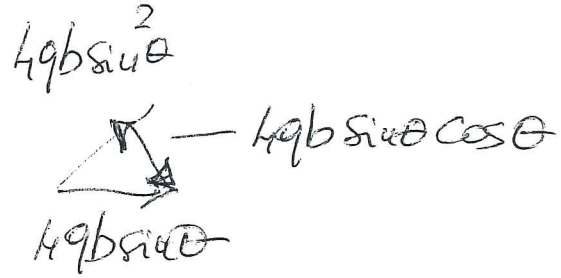


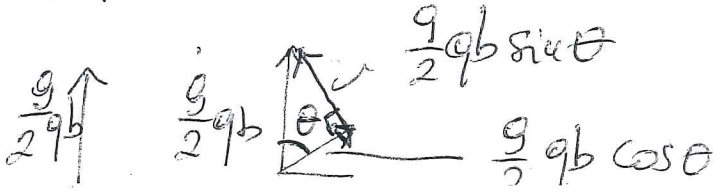


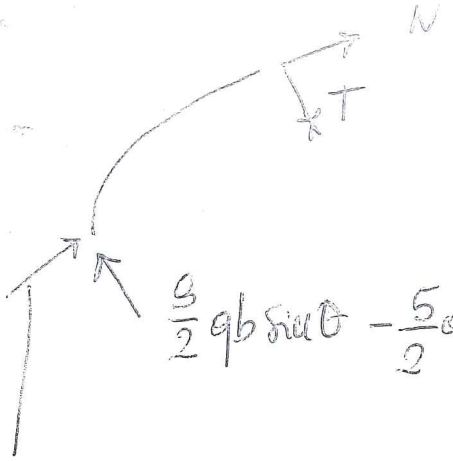


$\varphi = \frac{\pi}{2} - \theta$









$\frac{9}{2}qb\sin\theta - \frac{5}{2}qb\cos\theta - 4qb\sin\theta\cos\theta$

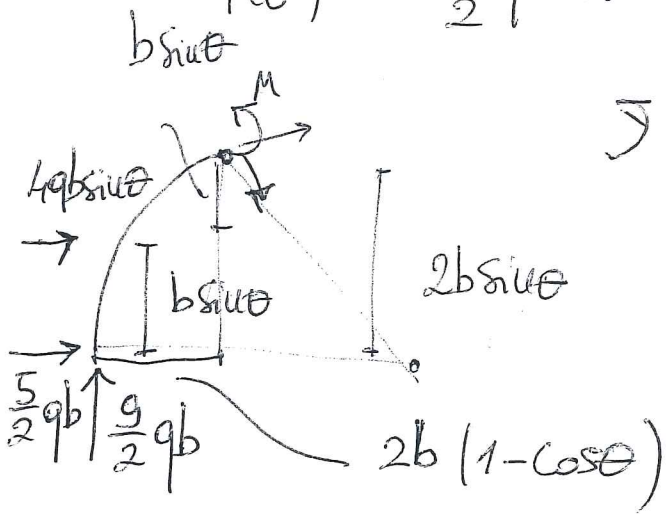
$\frac{5}{2}qb\sin\theta + 4qb\sin^2\theta + \frac{9}{2}qb\cos\theta$

$\nearrow R_{//} = 0 \quad \frac{5}{2}qb\sin\theta + 4qb\sin^2\theta + \frac{9}{2}qb\cos\theta + N(\theta) = 0$

$N(\theta) = -\frac{5}{2}qb\sin\theta - 4qb\sin^2\theta - \frac{9}{2}qb\cos\theta$

$\nwarrow R_{\perp} = 0 \quad \frac{9}{2}qb\sin\theta - \frac{5}{2}qb\cos\theta - 4qb\sin\theta\cos\theta - T(\theta) = 0$

$T(\theta) = \frac{9}{2}qb\sin\theta - \frac{5}{2}qb\cos\theta - 4qb\sin\theta\cos\theta$



$\circlearrowleft M_{z(\theta)} = 0 \quad \frac{5}{2}qb \cdot 2b\sin\theta - \frac{9}{2}qb\left(2b(1-\cos\theta)\right) + 4qb\sin\theta \cdot b\sin\theta + M(\theta) = 0$

$5qb^2\sin\theta - 9qb^2(1-\cos\theta) + 4qb^2\sin^2\theta + M(\theta) = 0$

$M(\theta) = 9qb^2(1-\cos\theta) - 5qb^2\sin\theta - 4qb^2\sin^2\theta$

$M(\theta=0) = 0$

$M(\theta=\frac{\pi}{2}) = 9qb^2 - 5qb^2 - 4qb^2 = 0.$