Contact forces?

Light table mass can be ignored.

guess: if $x = 0$, $N_1 = Mg$, $N_2 = 0$

crossed out

if $x = L$, $N_1 = 0$, $N_2 = Mg$

crossed out

if $x = \frac{L}{2}$, $N_1 = \frac{1}{2} Mg$, $N_2 = \frac{1}{2} Mg$
Net force is zero.
Net torque is zero.
\( 1a = 0 \)

1. Net force is zero:
2. Net torque is zero:
3. Net force is zero:

Statics.
torque = \tau = F \times r

\tau = \text{tension applied here}

axis of rotation

\phi

reference point

I = \frac{1}{12} mr^2
Forces in y-direction:

\[
A: N_1 + N_2 - N_0 = 0
\]

\[
B: N_0 - Mg = 0
\]

Torques (ccw):

\[
0 \cdot N_1 - xN_0 + L \cdot N_2 = 0
\]