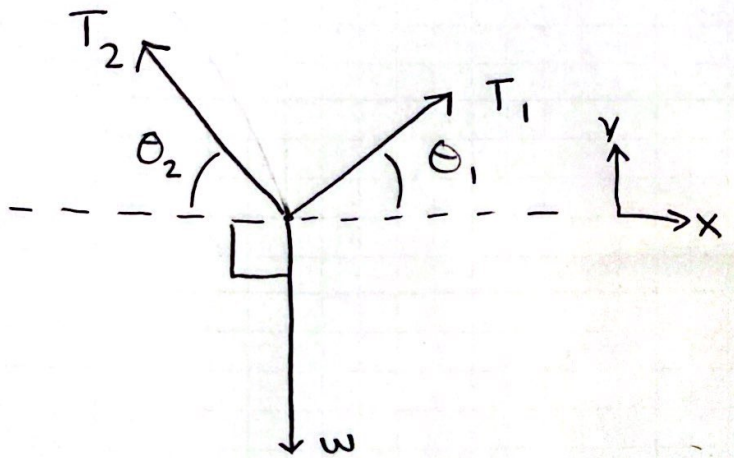


P: Write out symbolic solutions to solve the three variations of a generic hanging weight problem.

R:



O: T_1 and w unknown
 T_1 and T_2 are unknown.
 T_1 and θ_1 are unknown.

	x	y	Dir
T_2	$-\cos(\theta_2)$	$\sin(\theta_2)$	θ_2
T_1	$\cos(\theta_1)$	$\sin(\theta_1)$	θ_1
w	0	$-w$?

C: $\sum v_x: -T_2 \cos(\theta_2) + T_1 \cos(\theta_1) + 0 = 0$

D: $\sum v_y: T_2 \sin(\theta_2) + T_1 \sin(\theta_1) - w + 0 = 0$

2) set for unknown value by moving unknowns to the left

3) $-T_2 \cos(\theta_2) = T_1 \cos(\theta_1) + 0$

$T_2 \sin(\theta_2) = T_1 \sin(\theta_1) - w + 0$

set this as a matrix in the calculator

so...

$-T_2 \cos(\theta_2) = T_1 \cos(\theta_1) + 0 \xrightarrow{\text{RREF}}$

Signet answer for T_1