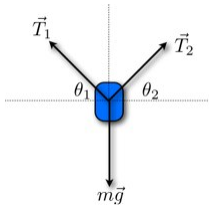
Tension Forces

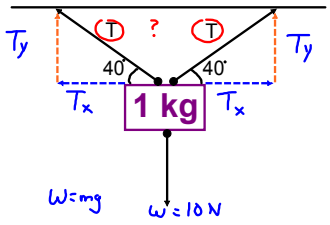
Objective:

Identify factors that affect the amount of tension in a string.

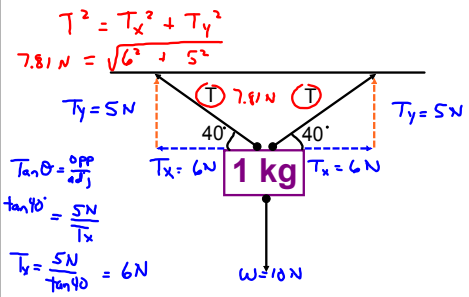
Calculate the tension in a string supporting an object at an angle.



Tension Forces



Tension Forces



Tension

W = m · g

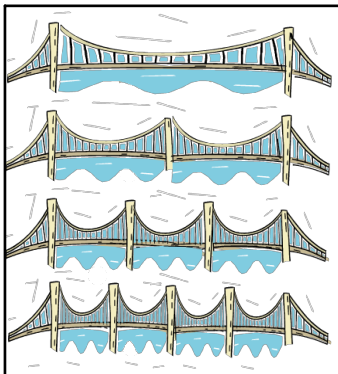
vertical: supports weight $T_y = \frac{W}{2}$

horizontal: 2 sides pull against each other

$\tan\theta = \frac{T_y}{T_x}$ $T_x = \frac{T_y}{\tan\theta}$

overall: actual tension in string

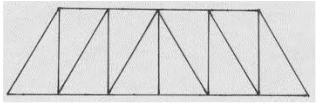
(may cause string to break) $T^2 = T^2_x + T^2_y$



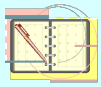
Simple Truss

a supporting structure or framework composed of beams or rods commonly of steel or wood lying in a single plane

used for large spans and heavy loads, especially in bridges and roofs

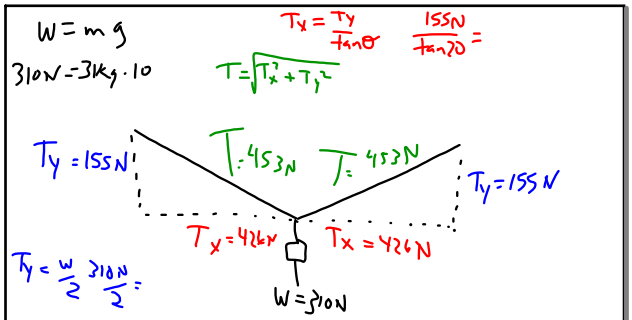


Assignments . . .



- Finish Ch 5 Homework # 1 - 10

- Begin Ch 5 Homework # 11 - 17



Nov 13-9:52 AM