Translational Equilibrium Practice Name:_____

Reflection and Self-Assessment

Completion: Circle the statement that best describes the completion of this practice.

- I completed every question on the practice.
- I did not complete some questions on the practice because:

_____

Answer Checking: Circle the statement that best describes how you checked your answers

- I checked all my answers against the key at the back and corrected any that were incorrect.
- I did not check all my answers and correct any mistakes because:

_____

Online Worked Solution: Circle the statement that best describes how you used the online worked solutions.

- I did not use the online worked solution at all.
- I used the online solution to understand some questions I got incorrect.
- I used the online solution to help me learn how to answer some questions.

Confidence: Circle the statement that best describes your confidence in answering questions of this type in the future.

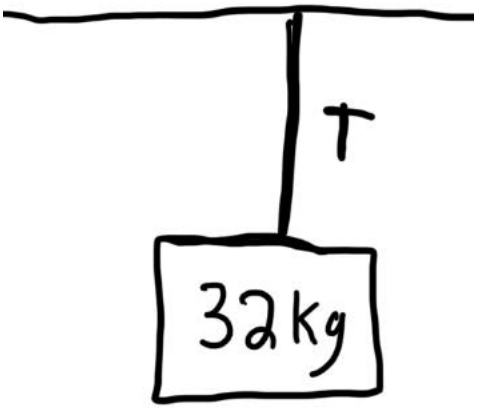
- I am confident I can answer nearly any question of this type correctly without using notes or other assistance.
- I am confident I can answer **MOST** questions of this type correctly without using notes or other assistance.
- I am **NOT** confident I can answer most questions of this type correctly without using notes or other assistance.

Time: Circle the statement below that best describes the total amount of time you spent actively working on this practice:

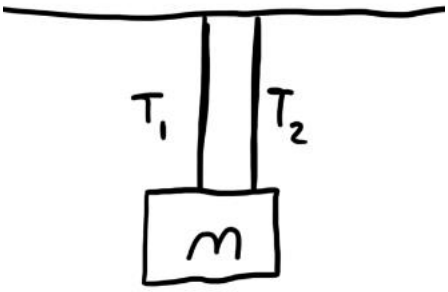
Less than an hour	Between one and two hours	Between two and three hours	Between three and four hours	More than four hours

Translational Equilibrium Practice Name:_____

1. A 32 kg mass hangs from a string, what is the tension in the string?

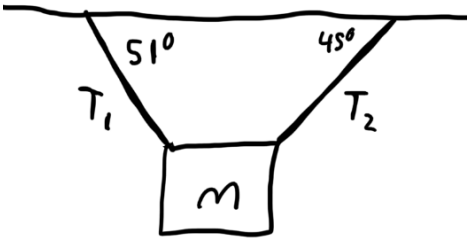


2. An object is hung from two strings, the tension in each string is 24 N. What is the mass of the object?



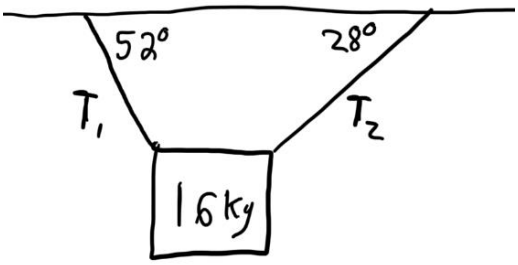
Translational Equilibrium Practice Name:_____

3. A mass is hung from two ropes as shown. The tension in the 1st rope (T_1) is 67 N. Determine the tension in the second rope and the mass of the object.



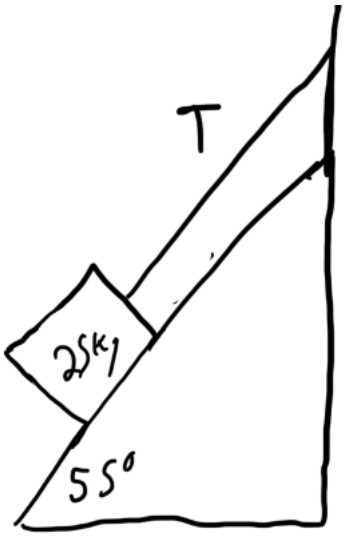
Translational Equilibrium Practice Name:_____

4. A 16 kg block is hung from two ropes as shown, determine the tension in each rope.



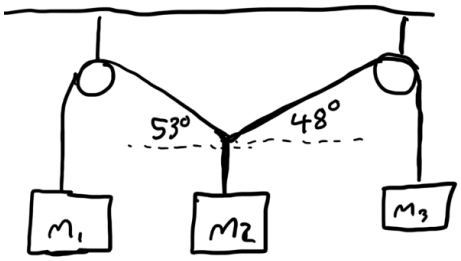
Translational Equilibrium Practice Name:_____

5. A 25 kg block is held on a 55° frictionless incline by a rope. Determine the tension in the rope.



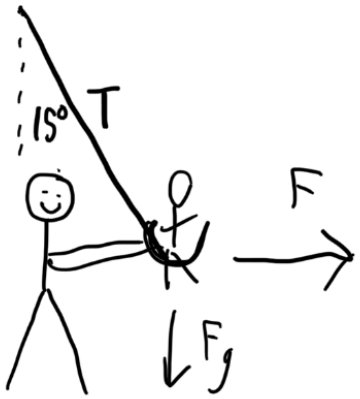
Translational Equilibrium Practice Name:_____

6. Three masses are in translational equilibrium, supported by pullies as shown. m_2 is 25 kg. What is the mass of the other two objects?



Translational Equilibrium Practice Name:_____

7. A father pushes his 22 kg daughter on a swing. He pushes the swing so it makes a 15° angle with the vertical (as shown).

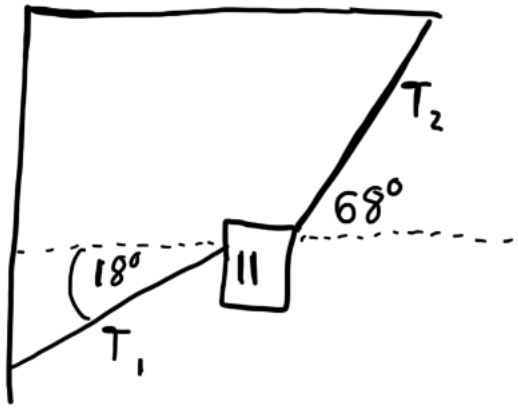


   a. What is the tension in the swing rope?

   b. What is the force the father is applying?

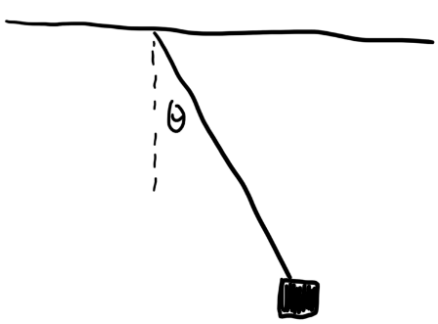
Translational Equilibrium Practice Name:_____

8. An 11 kg mass is supported by two ropes as shown. Determine the tension in each rope.



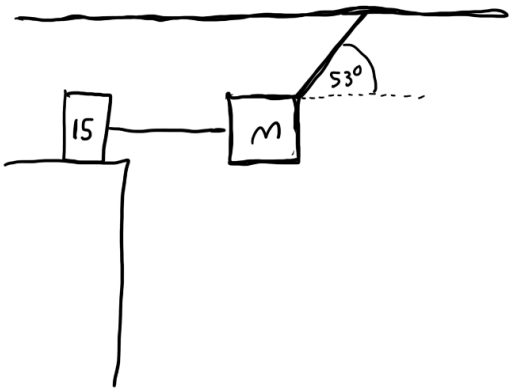
Translational Equilibrium Practice Name:_____

9. A 0.62 kg object is hung via a light string from the ceiling. A wind blows the object with a force of 2.0 N to the left. What angle does the string make with the ceiling?



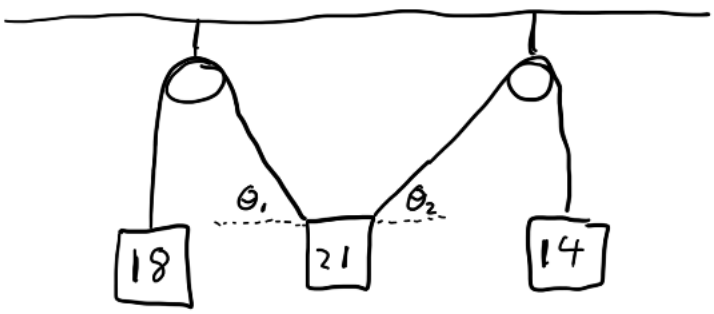
Translational Equilibrium Practice Name:_____

10. An object is suspended as shown. The 15 kg object is on a surface with μ of 0.44. What is the largest mass that can be suspended in this manner?



Translational Equilibrium Practice Name:_____

11. 18 kg, 21kg and 14 kg objects are hung as shown. What angles do the ropes make?



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Answer Key				
1) 310 N	2) 4.9 kg	3) Tension is 6.0×10^1 N Mass is 9.6 kg	4) T_1= 140 N T_2 = 98 N	5) 2.0×10^2 N
6) m_1 = 17 kg m_3= 15 kg	7a) 220 N	7b) 58 N	8) T_1 = 53 N T_2 = 130 N	9) 18°
10) 8.8 kg	11) $\theta_1 = 49°$ $\theta_2 = 32°$			