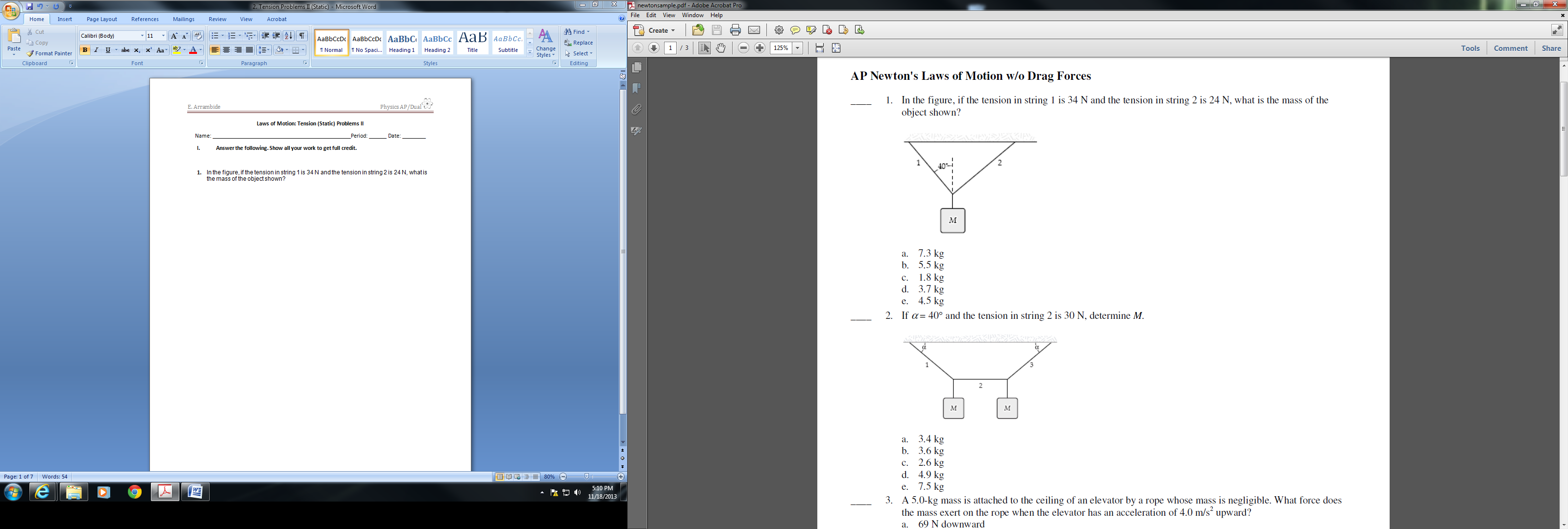
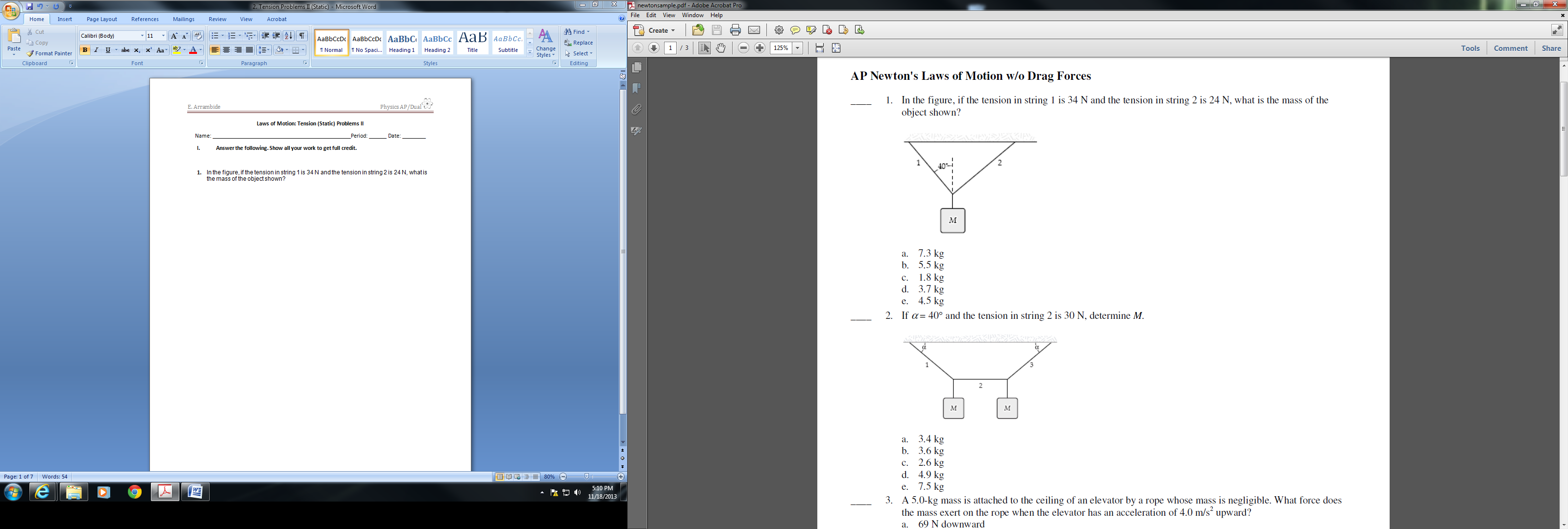
**Laws of Motion: Tension (Static) Problems II**

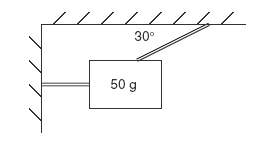
Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Period: \_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_

1. **Answer the following. Show all your work to get full credit.**
2. In the figure, if the tension in string 1 is 34 N and the tension in string 2 is 24 N, what is the mass of the object shown? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

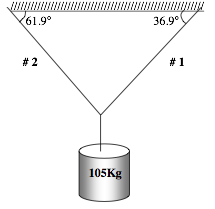
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1. If = 40and the tension in string 2 is 30 N, determine *M*. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. **A 50-g mass is hung by string as shown in the picture above. The left-hand string is horizontal; the angled string measures 30° to the horizontal. What is the tension in the angled string?**

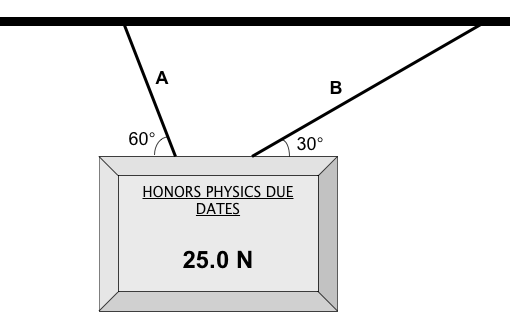
\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



**4. The two cables are used to suspend a 105 Kg object below the ceiling. Find the tension in each cable. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

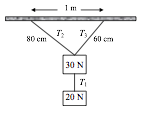


**5. A 25.0-Newton sign hangs from two chains as shown below. Determine the tension in each of the chains. TA = \_\_\_\_ TB = \_\_\_\_**

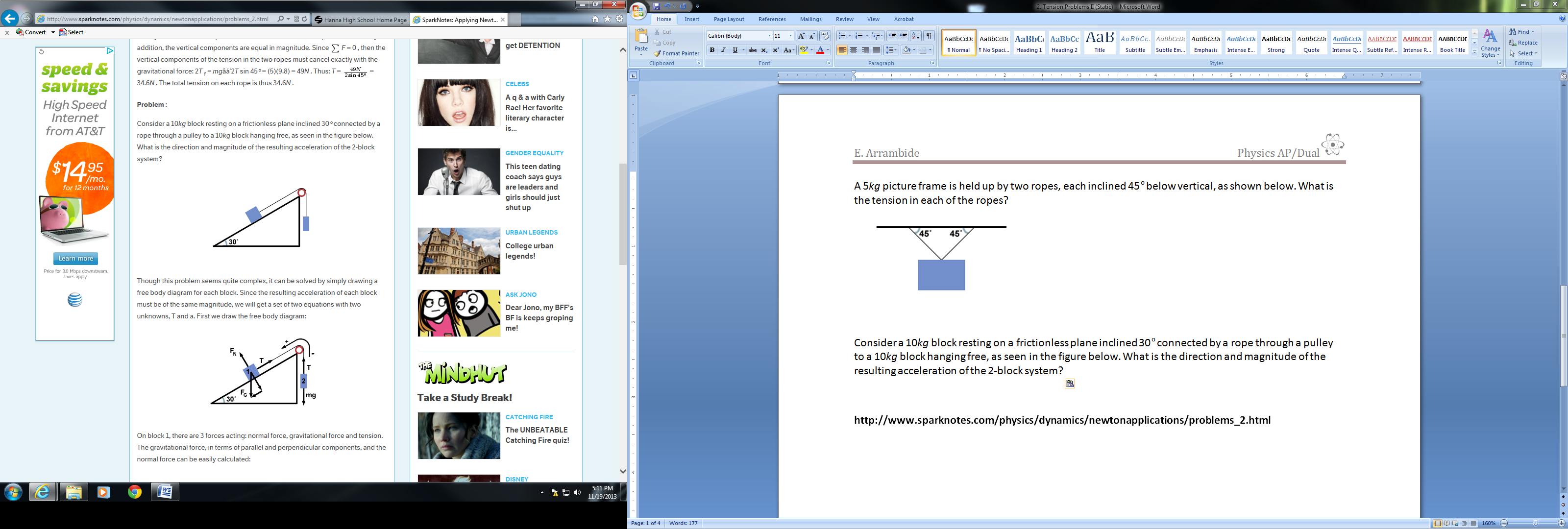


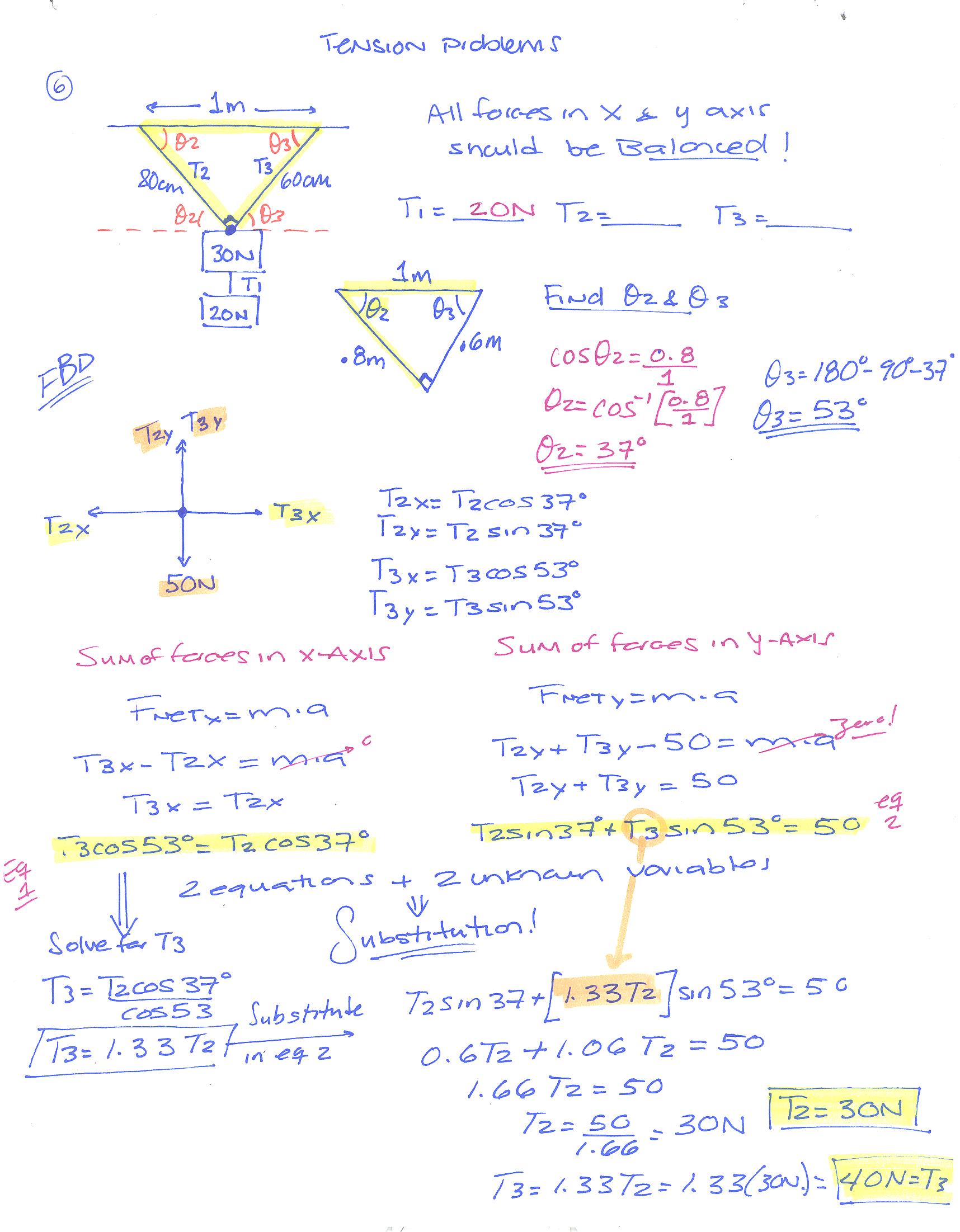
**6. A 30N block is hung from 2 cords as shown in the following figure. A 20N block hangs underneath the 30N block. The lengths of the top cords are given. Determine the tensions in all 3 cords.**

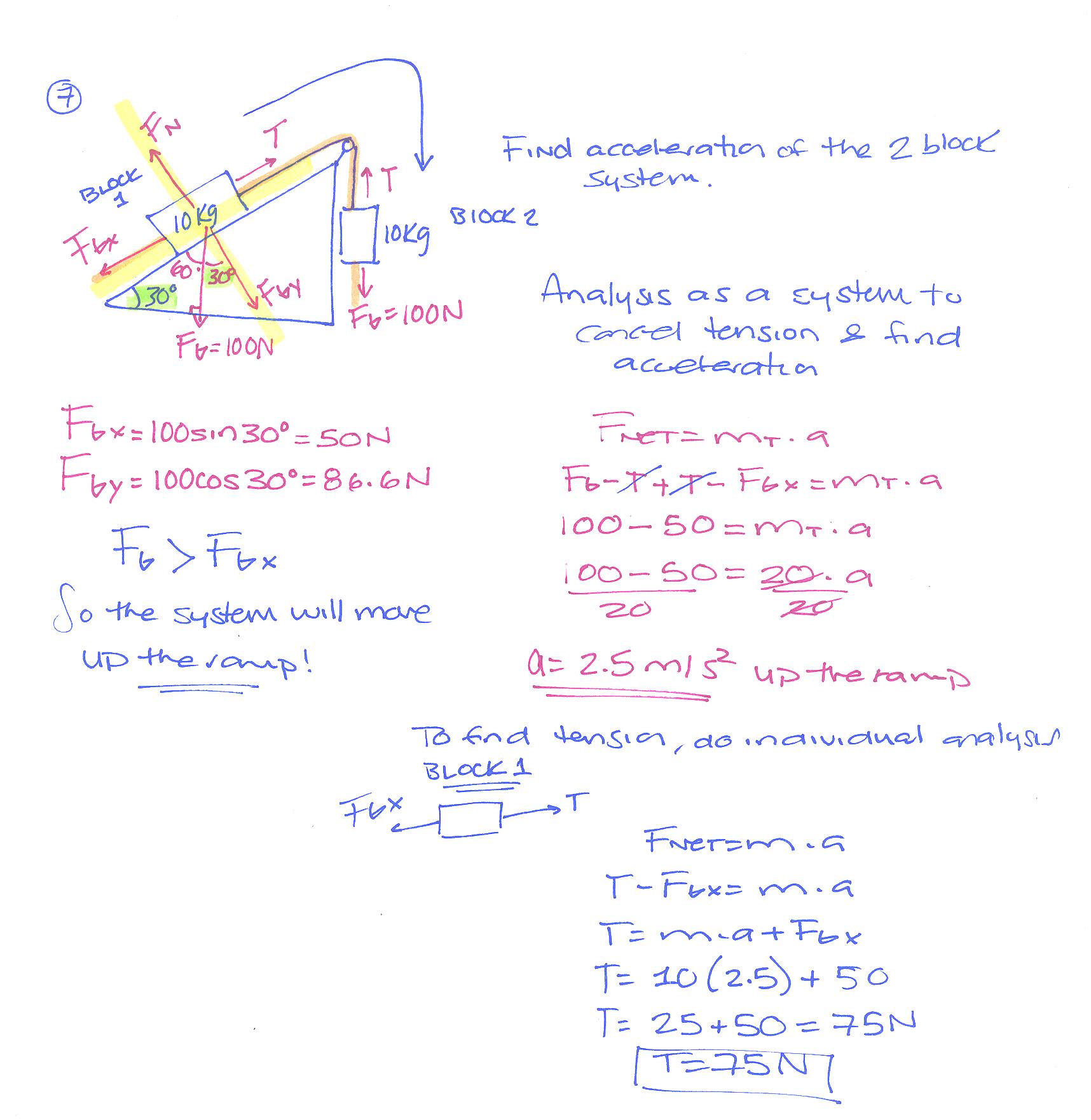
**T1= \_\_\_\_\_\_\_\_\_ T2= \_\_\_\_\_\_\_\_\_\_ T3 =\_\_\_\_\_\_\_\_\_\_**



**7. Consider a 10*kg* block resting on a frictionless plane inclined 30 o connected by a rope through a pulley to a 10*kg* block hanging free, as seen in the figure below. What is the direction and magnitude of the resulting acceleration of the 2-block system? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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