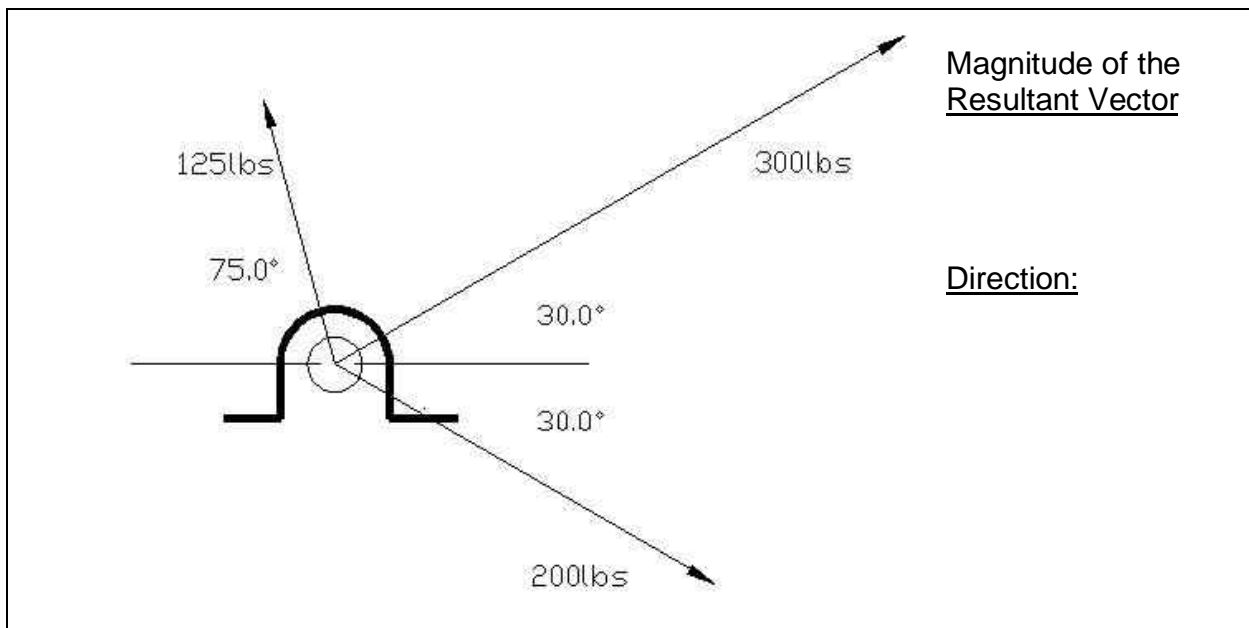


Mechanics Practice Examination

Name: _____ Date: _____

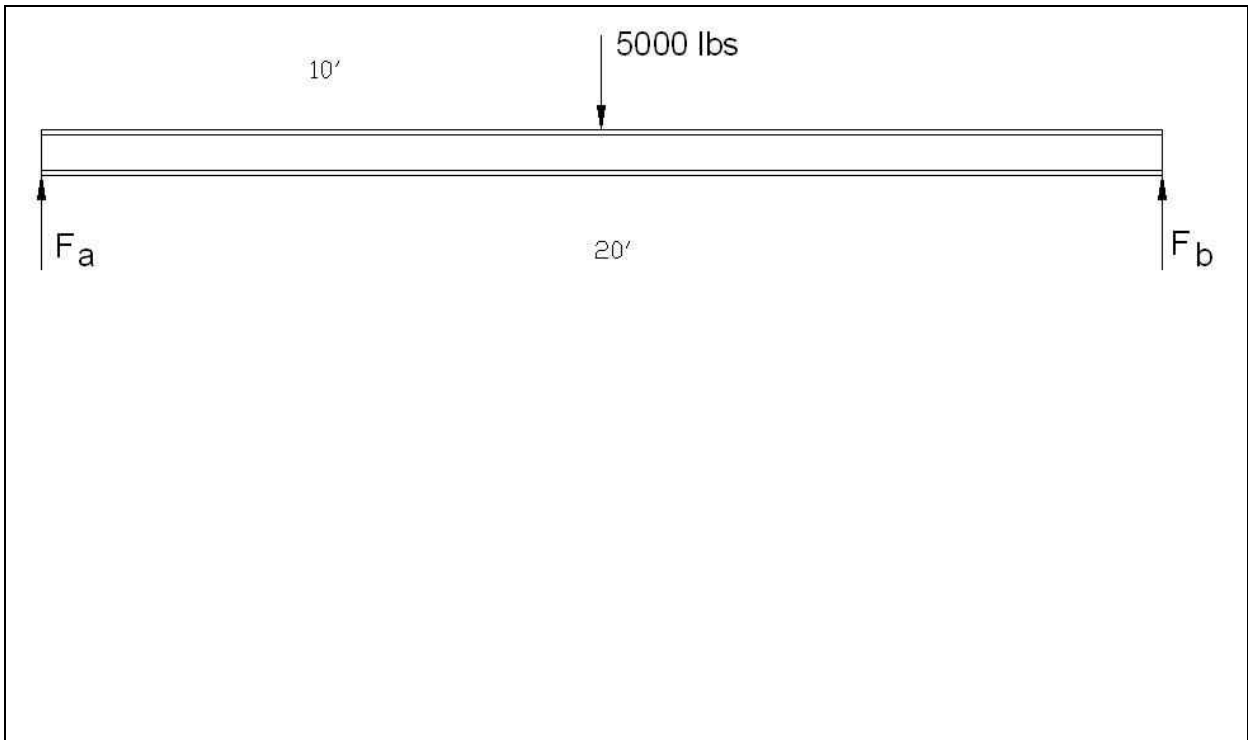
1. In statics, the sum of the forces in the X, Y or Z direction would equal _____.
 - a. The sum of the moments
 - b. The sum of the forces in the 4th dimension
 - c. The sum of the forces in acceleration
 - d. Zero
2. If Tim weighs 200 lbs and is sitting on the seesaw, 10 feet from the fulcrum and Amy is balancing Tim's weight at 15 feet on the other side of the fulcrum. How much does Amy weigh?

3. Find the resultant force of the hinge.

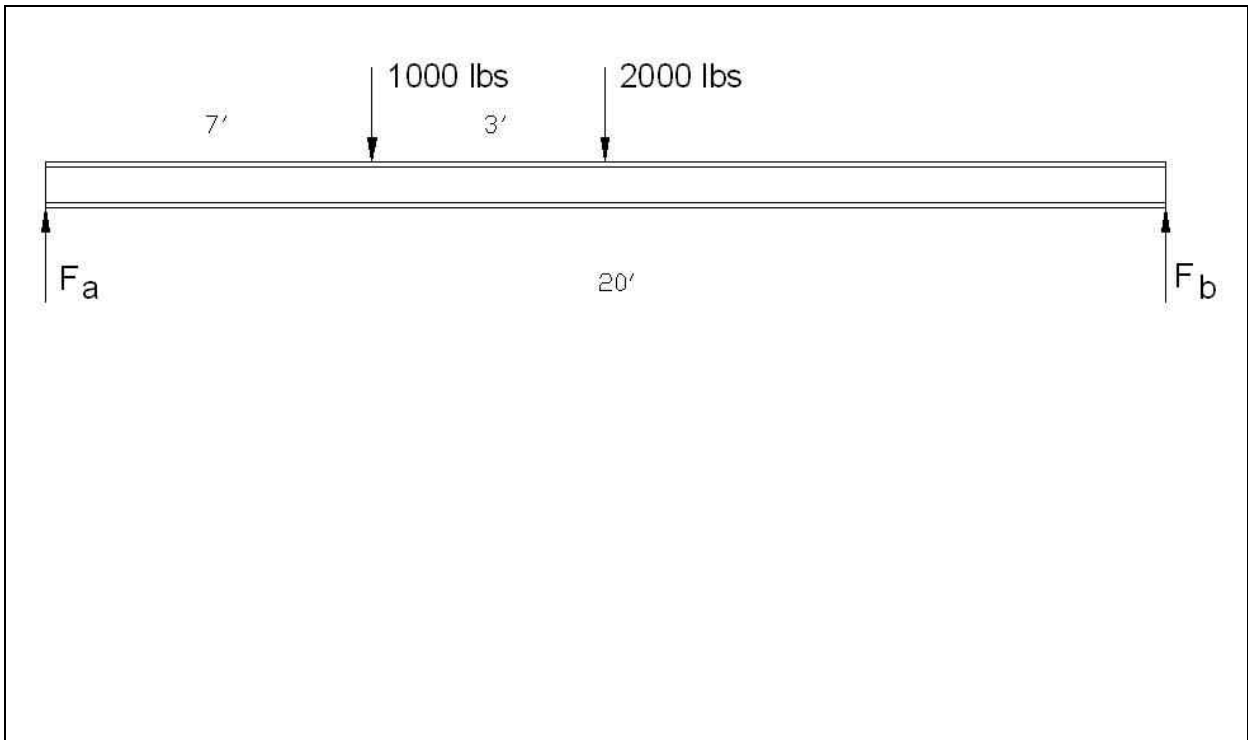


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4. What are the values of forces F_a and F_b ?

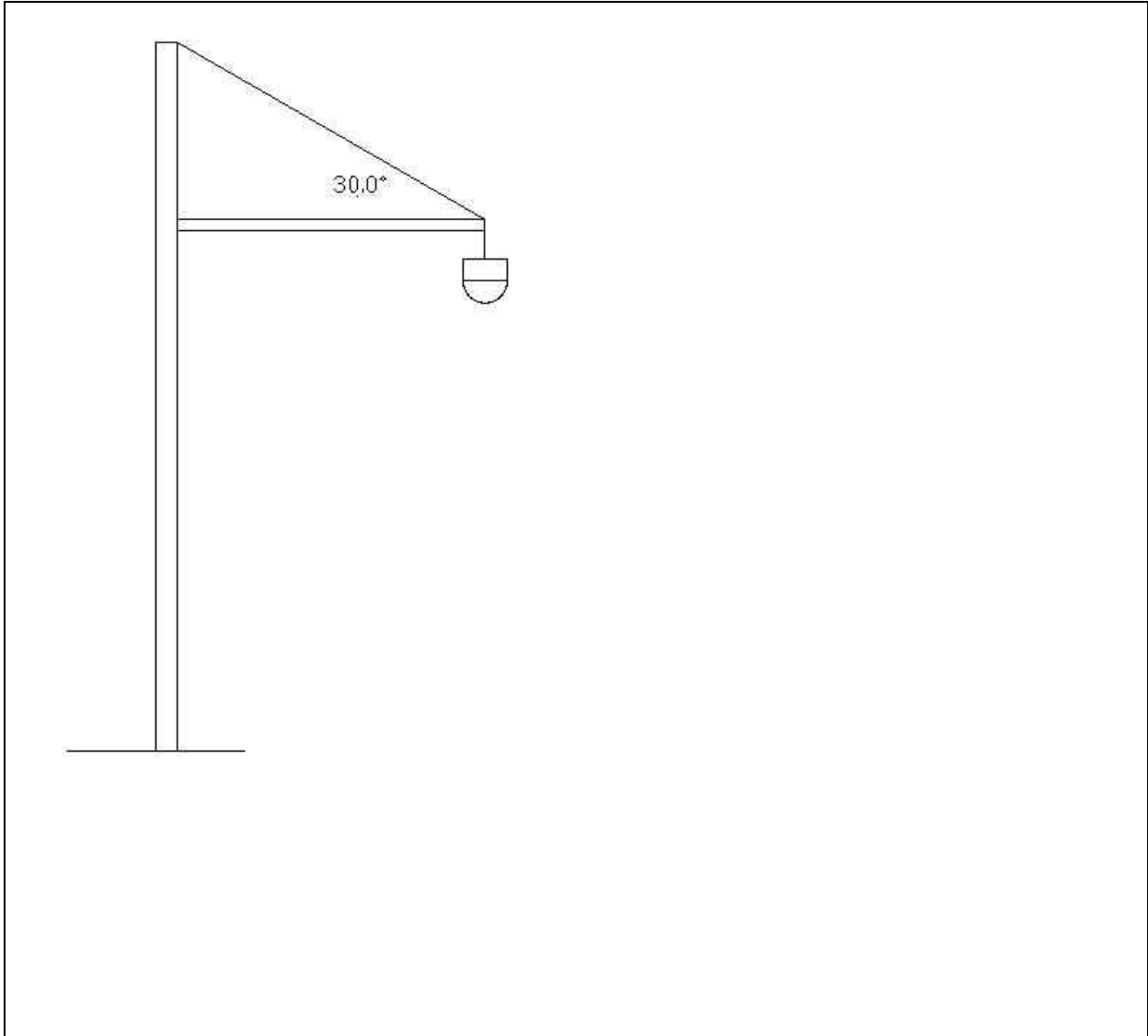


5. What are the values of forces F_a and F_b ?



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6. If the light weighs 200 lbs, what is the tension in the 30° cable? What is the compression force in the horizontal arm?



7. If the Terry is very slowly turning a bolt using a torque wrench clockwise and the dial is set at 100 in – lbs. What is the resistance of the bolt?
- 100 in – lbs clockwise
 - 100 in – lbs counterclockwise
 - Less than 100 in – lbs clockwise
 - Less than 100 in – lbs counterclockwise