HONORS PHYSICS Force Quiz Review	NAME:
Objectives: P3.1A,d P3.2A,C,d P3.4C,e,f	
Objectives: P3.1b, 3.1A, P3.6A,B,C,d	
Directions: Please show knowns/formula/so	olutions for full credit.

- 1. A 500kg mass accelerates at a rate of 45m/s/s. What force was applied?
- 2. A dog has a mass of 670 kg. What is his weight in N?
- 3. What force is needed to accelerate a mass of 300kg to 30m/s in 2m?

\_\_\_\_\_ n

4. A 3000kg car goes from 0 to 26m/s in 10s. What force was used?

\_\_\_\_\_ n

5. If the two masses are being accelerated upwards at 15m/s2 find the tension in each cable?

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----- T2

T1	
70k T2 20kg	

6. An 800kg elevator has 30000N tension in the cord while going up. What is its acceleration rate?

\_\_\_\_\_ m/s/s

7. The coefficient of static friction between a 15kg box and the floor is .6. What is the maximum horizontal force that can be applied to the carton before it slips?

8. Solve the following atwood's problem

----- acceleration

----- tension of cord



9. A Cube whose mass is 13.6kg rests on a smooth frictionless table. A cord runs from the cube over a pulley to a 8.4 kg mass. When the mass is released, find the acceleration of each body and the tension in the cord.



10. Two masses of 14kg and 17 kg are connected by a light string passing over a pulley as shown. Find the acceleration and tension. The angle at the base of each side of the triangle is  $75^{\circ}$ .

\_\_\_\_\_ m/s<sup>2</sup>

 $\sum$ 

\_\_\_\_\_N

11. A 290 kg object is sliding down a  $62^{\circ}$  inclined hill at a constant speed. Find the the coefficient of friction\_and the normal force.

-----mu

----- Fn

12. A 500kg car is going 50m/s and comes to a stop after 67m. Find the coefficient of friction