

Name _____ Period _____ Date _____

Force and Weight II

$$F = ma, Wt = mg, g = 9.8 \text{ m/sec}^2$$

1. What is the weight of a 65 kg object?
2. What force is needed to accelerate a 25 kg mass at 527 m/sec/sec?
3. What is the mass of an object that weighs 500 N ?
4. What is the weight of a 65 kg object on the moon if the acceleration of gravity on the moon is 1.63 m/sec² ?
5. If the force on an object is 706 N and the acceleration is 27 m/sec², what is the mass?
6. If your car left the stoplight and reached 40 m/sec in 5 seconds, and it took 6000 Newtons of force, what was the mass of the car?
7. What is the force if mass = 0.75 kg and acceleration is 2.7 m/sec/sec?
8. a) If your mass was 75 kg on the moon, what is your mass on the earth?
b) What is your weight on the earth?
c) What is your weight on the moon?
9. A force of 230 N was applied to a 45 kg mass. What is the acceleration?