

Study Guide for Quiz - Forces

Know:

Force

Net Force

Friction

Microwelds

4 Types of Friction

$$a = \frac{v_f - v_i}{t}$$

Air Resistance

Newton's Laws of Motion

Inertia

$$F = ma$$

Momentum

$$p = mv$$

- ① A truck hits another car with a force of 360 N at an acceleration of 36 m/s^2 . What is its mass?
- ② A person has a mass of 45,000 grams, how much do they weigh (acceleration of gravity = 9.8 m/s^2).
- ③ How much mass does a man that weighs 750 N?

↳ If this individual were on the moon, and the acceleration of gravity decreases by 8.13 m/s^2 , what would be his new weight?

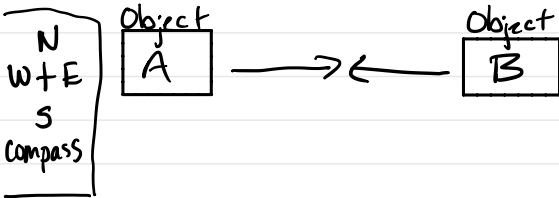
④ If a car accelerated to a certain constant velocity in 5 seconds from a resting position, what would be the momentum of the car if the amount of force it required to achieve that momentum was around 50,000 N and an acceleration of 4.7 m/s^2 ?

⑤ What would be the net force of two objects that collided with each other? Use the following givens:

Object A: Mass: 43 kg

Object B mass: 29 kg

They have the same acceleration of 0.95 m/s^2



⑥ An object accelerating is observed to have an instantaneous velocity of 3.9 m/s . If its mass is 30 Tg, what would its momentum be? Would it continue having this value of momentum?