Name: Period:

Forces in One Dimension 1: It's Personal!

Show all work including the equations and substitution with units

Use $g = 9.81 \text{m/s}^2$ 1) You are accelerated by a force of 20N. What is your acceleration?
2) What is the mass of an object that is accelerated at 25m/s ² by a force of 125N?
3) If you are traveling at a constant velocity on ice skates and you experience a force of -40N What is your acceleration?
4) A mass of 56kg weighs 504N on top of a mountain. What is the value of g at that location?
5) A student has a mass of 68kg. What is the student's weight?
6) A ball acquires a speed of 12m/s when a force is applied for a distance of 0.50m. If the ball has a mass of 1.0kg, what is the force applied?
7) Your car starts from rest and travels 50m in 3.0s. Your car undergoes uniform acceleration during the 3.0s. What is the unbalanced force on your car? (Write your answer in Scientific Notation.)