IPS
Practice Sheet #1 – "Newton's 2ⁿᵈ Law"
Ch. #11- "*FORCES*"

Name _____
Date _____
Period _____

Practice

1. The gravitational force that Earth exerts on the moon equals 2.03×10^{20} N. The moon's mass equals 7.35×10^{22} kg. What is the acceleration of the moon due to Earth's gravitational pull?

2. Assume that a catcher in a professional baseball game exerts a force of -65.0 N to stop the ball. If the baseball has a mass of 0.145 kg, what is its acceleration as it is being caught?

3. A type of elevator called a *cage* is used to raise and lower miners in a mine shaft. Suppose the cage carries a group of miners down the shaft. If the unbalanced force on the cage is 60.0 N, and the mass of the loaded cage is 1.50×10^2 kg, what is the acceleration on the cage?

4. A 214 kg boat is sinking in the ocean. The force of gravity that draws the boat down is partially offset by the buoyant force of the water, so that the net unbalanced force on the boat is -1310 N. What is the acceleration of the boat?