Newton's Laws Problems   **Name:** _____

1. A 235 g stationary puck is shot across frictionless ice toward the goal. If the stick is in contact with the puck for .054 s and the shot is clocked at 47 miles/second, how much force was applied to the puck?

2. A 45 kg girl is riding her 2 kg skateboard.   Calculate her acceleration if she applies a net force of 755 N.

3. A NASCAR driver enters the .55 km pit area at 185 miles/hour. If the total mass of his car is 1885 kg, calculate the minimum force necessary to stop the car.

4. A 10 kg pot is dropped from a window 75 m above the ground. How much force must be applied to catch the pot?

5. Twenty Leyden students participated in a tug of war. Team one had a total mass of 875 kg and team two had a total mass of 925 kg. If team one pulled with 11,245 N and team two pulled with 13,779 N, calculate the acceleration of the center of the rope.

6. A 2654 kg car slams into a brick wall traveling at 32 miles/second. The passengers in the car experienced a force of 245,650 N. How long did it take for the car to stop?