**IB Physics**

**FA7.1 - Impulse and Momentum**

Name

School Pet Peeve

**Show your work, and circle your answers and use sig figs to receive full credit.**

1. A hammer has 12.4 kg m/s of momentum, and is going 8.50 m/s, what is its **mass**? (1.46 kg)

2. A rocket exerts 10.3 N of force for 2.23 seconds. What **impulse** does it impart? (23.0 Ns)

3. A 17.5 N unbalanced force is exerted on a 67.1 Kg mass for 37.2 seconds. What is the change of **velocity** of the mass? (9.70 m/s)

4. A .142 Kg baseball going 41 m/s, strikes a bat, and heads straight **back** to the outfield at 53 m/s. If the bat exerted a force of 2350 N, for what **time** was it in contact with the bat? (0.00568 s)

5. A rocket engine burns fuel at a rate of 53.5 grams per second, and develops a force of 65.2 N. What must be the exhaust **velocity**? (1000 grams = 1 kg) (1220 m/s)