**IB Physics**

**FA 26.1**

Name

Favorite Murrayism

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

1. A bus measures 12.5 m long at rest. What is its speed if it is 12.4 m long? (.126 c)

2. A stopwatch is put into a centrifuge and sped up to .850c. What time will it take (in our reference frame) for the moving stopwatch to register 60.0 seconds? (114 s)

3. Joe is on a flatbed car going .85 c straight toward you. He throws a baseball forward relative to the flatbed car at .62 c. How fast is the baseball moving with respect to you? (.96 c)

4. What is the kinetic energy of a .142 kg baseball going .78c? (7.6x1015 J)

5. What is the velocity of a 0.128 MeV electron? (.600 c)