**Who would win? Name:**

Conversions:  
1 mach = 344 m/s, the speed of sound  
1 inch = 2.54 cm  
1 lb = 0.454 kg  
1 um = 1 x 10-6 m  
1 nm = 1 x 10-9 m  
1 mile = 5280 feet

Things you really ought to know by now but I’ll tell you this time:  
100 cm = 1 m  
1000 m = 1 km  
1 ft = 12 inches

**Show your work. ALL OF IT. Humor me. If you make a claim, you must support it with evidence!**

1. What is taller, the very top of a football goal post (30 ft), or a brachiosaur (17 m)?
2. Put these in order of length: a school bus (40 ft), a giant squid (14 m), and your small intestines (240 inches).
3. What is heaviest, a grizzly bear (521 kg) or a 2009 Ford Taurus (3642 lb)?
4. Which is the greatest distance, the distance from the surface of the ocean to the deepest point (36,200 feet), the height of the tallest mountain, 8848.04 m), or the distance from Austin to Houston (162.3 miles)?
5. Put the following in order, from smallest to largest: diameter of a red blood cell (7.5 um), the width of a strand of thick hair (0.018 cm), the width of a DNA strand (2.5 nm), the diameter of the bacteria that causes acne when it is out of balance (5.9 x 10-5 inches).
6. What is faster, a blackbird jet going mach 1 or a rocket leaving the atmosphere at 7.9 km/s?
7. What is faster, a bullet (560 ft/s) or the speed of sound (344 m/s)?
8. What is faster, a neuron firing (140 mph), or the cracks that form when you break glass (3000 m/s)?
9. If you can run 27 mph, can you move faster than the Hawk moth, which can fly at 14.8 m/s?