

Quiz 1 (Aug. 29, 2013)

Name:

Email:

1 Poll

1.1 What is your favorite programming language?

1.2 What do you use to make numerical plots?

1.3 Do you have a laptop you can bring to class? Is it installed with the above?

2 Pennies

This morning I grabbed 32 pennies on the way to work. In a minute, I'm going to toss them on the table and count how many heads (H) and tails (T) there are.

2.1 What is $\langle H - T \rangle$ (the expected value of $H - T$)?

2.2 What is $\langle |H - T| \rangle$?

3 Dumbbells

I also brought two (light) dumbbells in. A bit later, we are each going to twist back and forth while holding them outstretched in our arms at a fixed angular frequency, ω . We are also going to try standing still and pumping the dumbbells alternately toward and away from each other, again with angular frequency ω .

3.1 Which do you anticipate feeling harder?

3.2 If we quantized this system, which do you think would take a larger energy quantum to start oscillating?