

Physics 303K Worksheet 10

1. Name (Write legibly! If I can't read your name, you don't get credit for attending.):

2. Turning a Bicycle versus Turning a Motorcycle

Is there a difference in technique? What are the physics behind the difference?

3. Energy of separation

Two particles start out distance x_0 apart. How much energy does it take to separate entirely two masses if the force between them obeys:

(a) $F = -kx$ (like a spring)

(b) $F = -\frac{k}{x}$ (like 2D vortices)

(c) $F = -\frac{k}{x^2}$ (like gravity and 3D electric charge)