Energy Homework 1

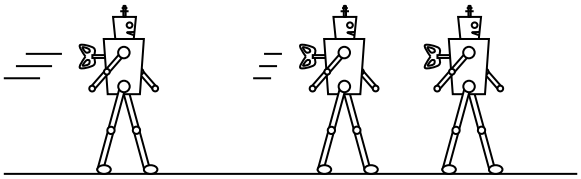
Name: _____

Hour: _____ Date: _____

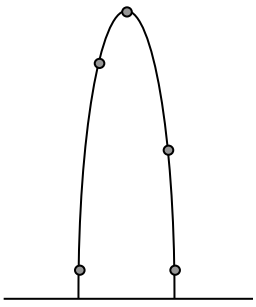
For each of the situations depicted below create **energy pie charts** for each position shown. Include arrows that show the forces that transfer the energy.

1. A ball is dropped from rest and falls straight toward the ground. Ignore air friction and analyze only before the ball hits the ground.

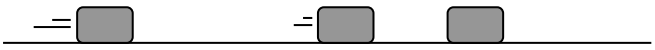
2. A wind up toy is would up and then walks across a table and then comes to a stop.



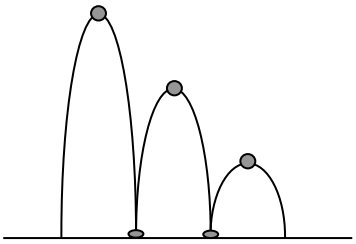
3. A ball is thrown up into the air and falls back down. Draw velocity arrows next to each ball.



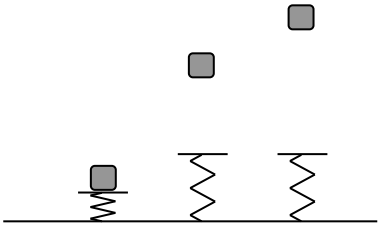
4. A block slides to a stop along a rough surface.



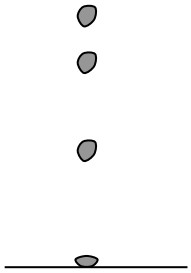
5. A Superball is dropped and bounces up and down. Why doesn't the ball bounce as high each time? Where did the energy go?



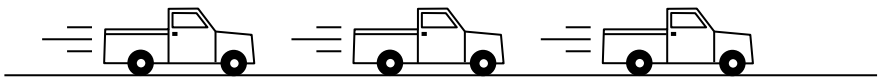
6. A block rests on a compressed spring and it then launched upward and comes to a stop at its max height.



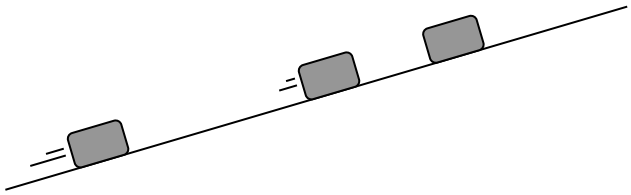
7. A piece of clay is dropped to the floor.



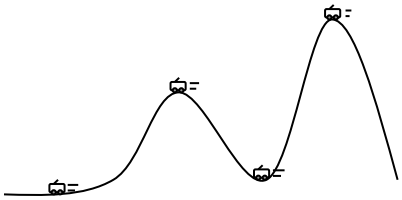
8. A truck is driven down the street at a constant speed.



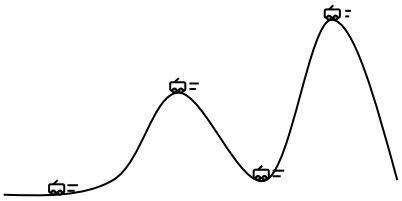
9. A block is slid up a ramp and comes to a stop.



10. A rollercoaster car rolls and coasts as shown. Assume no friction.



11. A rollercoaster car rolls and coasts as shown. Assume friction.



12. A bungee jumper steps off a tower and falls. The bungee cord catches him and brings him to a stop before he splats on the ground.