Oh-Boy! **It’s Another Work-Energy Worksheet**

**For Physics 12!!**

1. A 10.0 kg mass slides, from rest, down the ramp shown. If Vf = 8.70 m/s find the work done by friction.

6.00m

2. A 250 g ball is thrown straight into the air with a speed of 20.0 m/s. If it flies to a height of 17.0 m, find the work done by air

resistance.

3. A 67 kg bungee jumper jumps from a height of 40.0 m. After 20.0 m the bungee chord begins to slow him down. After 9.00m

FURTHER his speed is 4.5 m/s (downward). Find the spring constant of the chord.

4. The 2.2kg ball rolls along the track shown below, from A to B. If the ball is moving at 6.8m/s at point B, and loses 55J of energy as heat, what was its speed at A.

A

12m

B

8.0m

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A

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5. This ball is released from rest at the top of this 4.0m

high ramp. The curves are frictionless. If the coefficient of friction on the 6.0m flat bottom is 0.128, to what height will the ball roll on the opposite side?

6.0m

4.0m

6. The motor shown below pulls the 5.00kg block up the ramp, from rest, with a constant force **F**motor. After travelling 10.0m along the ramp (a vertical height of 4.00m) the block has a final velocity of 5.00m/s. The force of friction on the block is 28.3N find **F**motor.

4.0m

motor

10.0m

vf

7. A bungee jumper jumps from a cliff. The jumper falls 18m before the cord begins to stretch. After falling an **additional** 7.0m, the 59kg jumper is slowed to 6.4m/s. Find the k-value of the cord.

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