IB Physics
FA6.1 - Work and Power

Name_____

Favorite YouTube Video (besides physics)_____

When you have finished this, go to the website and check your answers. If you got a problem wrong, cross it off on the front, and do it correctly on the back.

Show your work, and circle your answers and use sig figs to receive full credit.

1. If a heater is 78.0% efficient, how much fuel energy would it consume to provide 120. J of useful heat? How much useful heat could it produce from 360. J of fuel energy?

2. How much time does it take for a 450. Watt heater to produce 4580 J of heat? What heat will it produce in 15.0 seconds?

3. What work would you do dragging a 56.5 kg box 12.0 m over a level floor (at a constant low speed) where the coefficient of dynamic friction is 0.215?

4. What is the minimum power rating a motor could have if it is to lift a 560. kg elevator 35.0 m in 78.0 seconds?