**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?