Wile E. Coyote sets up a pulley to lift a gigantic boulder over a valley highway in an attempt to squish the Roadrunner. Wile E. Coyote puts 3402 J of energy into the pulley while the pulley does 2938 J of work. Calculate the efficiency of the pulley.

2. Wile E. Coyote's previous attempt of killing the Roadrunner failed so he decided to use an inclined plane to push a boulder down onto the Roadrunner. The output work done by the inclined plane is 875 J and the input work is 1285 J. Calculate the efficiency of the inclined plane.

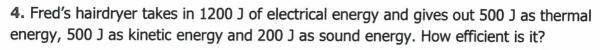
3. After another failed attempt, Wile E. Coyote grabs a stick to create first class lever. He inputs 445 J of work and the output work of the lever is 430 J. Calculate the efficiency.

4. Wile E. Coyote tries chasing after the Roadrunner with his Acme 200 Cyclone bicycle. The output of bike is 2890 J of work while the input was 4122 J. Calculate the efficiency of the Acme 200 Cyclone.

5. Wile E. Coyote wants to poison the Roadrunner by putting arsenic in some bird feed. The arsenic comes in a can so he must use a can opener. If Wile E. Coyote applies 34 J of work and the can opener does 27 J work then what is the efficiency of the can opener?

6. In his last attempt Wile E. Coyote creates a catapult to launch a boulder. After construction, Wile E. Coyote sets up the catapult and waits for the Roadrunner. When the Roadrunner appears he puts 793 J of work into the catapult while it does 720 J of work. What is the efficiency this catapult?







efficiency =
$$83^{\circ}$$
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5. Fred's TV takes in 2000 J of electrical energy and gives out 1100 J as light energy. 300 J is given out as sound energy and 600 J as thermal energy. How efficient is it?

6. Fred's light bulb takes in 60 J of electrical energy and gives out 54 J as thermal energy and 6 J as light energy. How efficient is it?

efficiency =
$$\frac{10}{10}$$

7. Fred's other light bulb takes in 20 J of electrical energy and gives out 2 J as thermal energy and 18 J as light energy. How efficient is it?

8. Fred wants to spend as little money as possible on his light bulbs and running them. What should he consider in trying to do this?

9. Fred's lawnmower takes in 1500 J of energy and gives out 500 J of kinetic energy. 400 J is also given out as sound energy and 600 J as thermal energy. How efficient is it?

efficiency =
$$\frac{33}{3}$$

10. Fred's heater gives out 1900 J of thermal energy, 90 J of sound energy and 10 J of light energy. How efficient is it?