1. Go to page 558 of your book. Read the short biography of Enrico Fermi.

2. Read the article *Cinema, Fermi Problems and General Education* to get an idea about Fermi Problems and how to apply them. Describe in your own words what a Fermi Problem is. Some people call it a *back-of-the-envelop problem*. Where do you think this name comes from?

3. Here is a Fermi problem for you: estimate how much electric energy is used in the USA per year. (You are asked here to find a number after a quick calculation. Do not look at this number from a source and just report it.) **Hint:** Look at your electric bill to see how much energy you consume. Then think how to scale up the quantity to include everyone in the country.

4. Find (from an authoritative source) the energy consumed in USA per year. (Report your source.) How close you are? Even if you are not close, do not worry. Try to identify what might have gone wrong in your calculation and report it. (Of course, we assume that you have performed the numerical multiplications, additions, etc correctly. These are not the errors we are looking for. We are only trying to identify what assumptions could probably be wrong.)