Energy Levels

You need: a calculator, a classmate

ACTIVITY

Doing exercise uses up energy. This energy is measured in kilojoules.

1. The figures below show how many kilojoules a 50 kilogram person might burn in 1 hour of exercise.

   a. Running   2 800
   b. Swimming   1 600
   c. Jumping rope   2 400
   d. Horse riding   800
   e. Walking   700
   f. Yoga   800
   g. Soccer   2 000
   h. Rugby   1 800
   i. Digging a garden   900
   j. Aerobics   1 200
   k. Surfing   600
   l. Rowing   1 400

   If I walk instead of run …
   $\frac{700}{2\,800}$ is the same as $\frac{1}{4}$.
   So I'll need to walk for four times longer.
   That's 4 hours!

   How much time would a 50 kilogram person have to spend on each of the other activities to use as many kilojoules as used in 1 hour of running? Round your answers to the nearest whole minute.

2. A large steak contains about 3 000 kilojoules. Playing one game of soccer for $1\frac{1}{2}$ hours uses 3 000 kilojoules. How much time would a person have to spend walking, rowing, or doing aerobics to use 3 000 kilojoules?

3. Watching television uses only 200 kilojoules an hour. Reading uses 260 kilojoules an hour. How many hours of watching television or reading would use up the 1 300 kilojoules of fish and chips you might eat for dinner?

4. Discuss with a classmate how many kilojoules a 50 kilogram person might use in 1 day. (You will have to estimate the kilojoules for some activities.) Use the information on this page and your answers to help you. You might want to include activities such as eating, sleeping, sitting at the computer, or talking on the phone.

Using ratios and calculations involving time