## Estimate the thickness of a page in a textbook.

# 1. $10^{0} \mathrm{~m}$ <br> 6. $10^{-5} \mathrm{~m}$ <br> 2. $10^{-1} \mathrm{~m}$ <br> 7. $10^{-6} \mathrm{~m}$ <br> 3. $10^{-2} \mathrm{~m}$ <br> 8. $10^{-7} \mathrm{~m}$ <br> 4. $10^{-3} \mathrm{~m}$ <br> 9. $10^{-8} \mathrm{~m}$ <br> 5. $10^{-4} \mathrm{~m}$ 

# Estimate the number of cells in your body. 

1. $10^{0}$
2. $10^{2}$
3. $10^{4}$
4. $10^{5}$
5. $10^{6}$
6. $10^{8}$
7. $10^{10}$
8. $10^{12}$
9. $10^{14}$

## Activity

- Dollar and penny


## An example from a math exam

- Writing the equation in this problem on a physics exam would receive 0 credit and the comment: "This is a meaningless equation!"

The population density of trout in a stream is

$$
r(x)=20 \frac{1+x}{x^{2}+1}
$$

where $r$ is measured in trout per mile and $x$ is measured in miles. $x$ runs from 0 to 10.
(a) Write an expression for the total number of trout in the stream. Do not compute it.

How would you fix this?

## Activity

- Pizza sale


## Measurement is basically about counting.



