

## Honors First Assignment (Homework)

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**Physics\_Questions\_0042**

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1.

Estimate the order of magnitude of the length, in meters, of each of the following:

- (a) a mouse
- (b) a pool cue
- (c) a basketball court
- (d) an elephant
- (e) a city block.

2.

Estimate the number of times your heart beats in a month.

3.

Enter your age in years and months (to the nearest month).

Using these numbers, estimate your age in seconds.

4.

Estimate the number of atoms in  $1 \text{ cm}^3$  of a solid. (Note that the diameter of an atom is about  $10^{-10}$  m.)

5.

An ancient unit of length called the cubit was equal to six palms, where a palm was the width of the four fingers of an open hand. Noah's ark was 300 cubits long, 50 cubits wide, and 30 cubits high. Estimate the volume of the ark in cubic feet. Also, estimate the volume of a typical home and compare it to the volume of the ark.