

Common misconceptions in physics

Henn Voolaid

Tartu Univesity

Tere!



International misconceptions

- The standing body is affected only by the gravity force
- An atom consists of the electrons and protons
- Light is a mixture of particles and waves
- Hydrogen is a typical atom
- Voltage of the alternative current is constant

National misconceptions

- The gravity of the Earth is caused by the magnetic field of the Earth
- Heat and temperature are both measured in degrees
- There are photons emitted from material in case of photoeffect
- Velocity of the sound is higher if the loudness is higher

Efficiency *means*
by the resources present
to get the maximum amount
of the new knowledge and skills

$$E = T_2 - T_1$$

where E is efficiency,
 T_1 - result of the pre-test,
 T_2 - result of the post-test.

Result of the pre-test

$$T_1 = \frac{\sum_{i=1}^N n_i}{N \cdot n}$$

N – number of students who took the test;

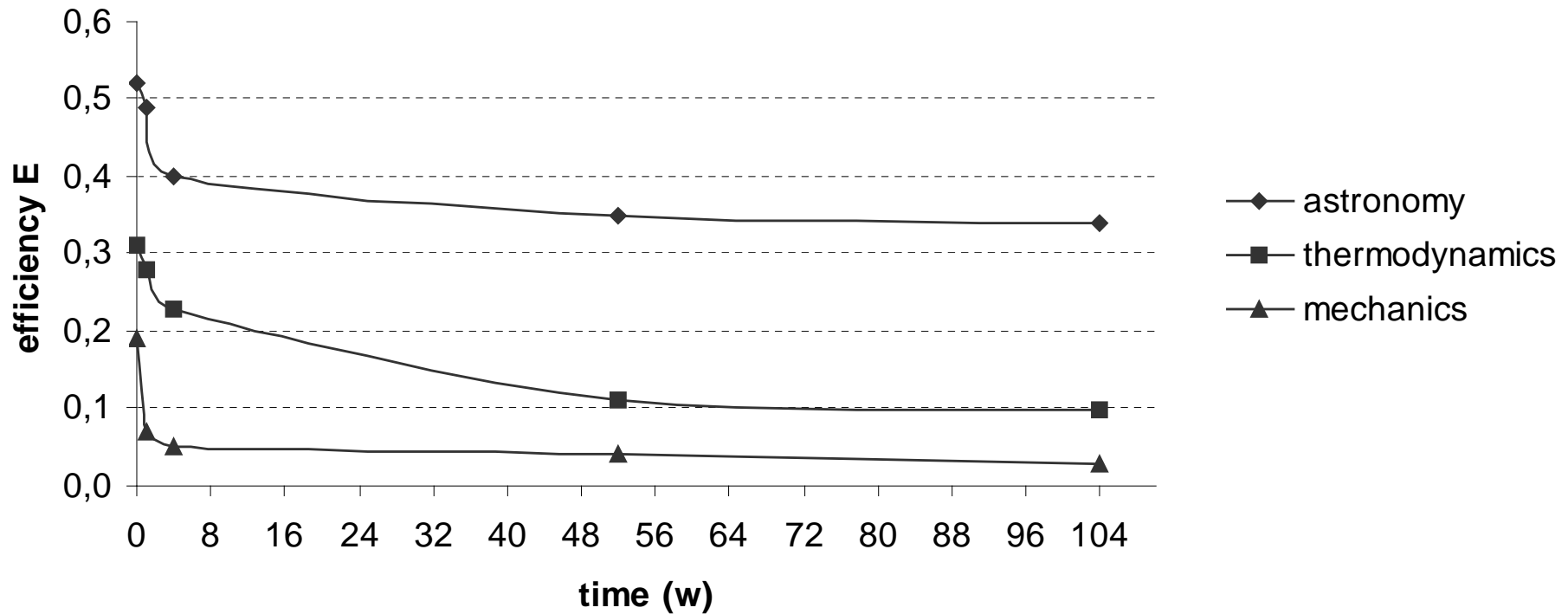
n – number of questions in the test;

n_i – number of correct answers by one student.

Result of the post-test

$$T_2 = \frac{\sum_{i=1}^N n_i}{N \cdot n}$$

Forgetting curves



Thank you
for your attention!