




# Standardized Test Prep

## MULTIPLE CHOICE

- What area of physics deals with the subjects of heat and temperature?
  - mechanics
  - thermodynamics
  - electrodynamics
  - quantum mechanics
- What area of physics deals with the behavior of subatomic particles?
  - mechanics
  - thermodynamics
  - electrodynamics
  - quantum mechanics
- What term describes a set of particles or interacting components considered to be a distinct physical entity for the purpose of study?
  - system
  - model
  - hypothesis
  - controlled experiment
- What is the SI base unit for length?
  - inch
  - foot
  - meter
  - kilometer
- A light-year (ly) is a unit of distance defined as the distance light travels in one year. Numerically,  $1 \text{ ly} = 9\,500\,000\,000\,000 \text{ km}$ . How many meters are in a light-year?
  - $9.5 \times 10^{10} \text{ m}$
  - $9.5 \times 10^{12} \text{ m}$
  - $9.5 \times 10^{15} \text{ m}$
  - $9.5 \times 10^{18} \text{ m}$
- If you do not keep your line of sight directly over a length measurement, how will your measurement most likely be affected?
  - Your measurement will be less precise.
  - Your measurement will be less accurate.
  - Your measurement will have fewer significant figures.
  - Your measurement will suffer from instrument error.
- If you measured the length of a pencil by using the meterstick shown in the figure below and you report your measurement in centimeters, how many significant figures should your reported measurement have?
  - one
  - two
  - three
  - four
- A room is measured to be 3.6 m by 5.8 m. What is the area of the room? (Keep significant figures in mind.)
  - $20.88 \text{ m}^2$
  - $2 \times 10^1 \text{ m}^2$
  - $2.0 \times 10^1 \text{ m}^2$
  - $21 \text{ m}^2$
- What technique can help you determine the power of 10 closest to the actual numerical value of a quantity?
  - rounding
  - order-of-magnitude estimation
  - dimensional analysis
  - graphical analysis