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Phy101 Physics I
Quiz1-Measurement
October 01, 2026 11:00 & 13:30
Good Luck!

◇ Open Source Quiz
◇ Answer all the questions. Write the solutions explicitly and clearly. Use the physical terminology
◇ Calculator is allowed. You are not allowed to use any other electronic equipment in the exam

1. A) Calculate the following, round off to the correct number of significant figures, and express your result in scientific notation:
   - i $(200.9)(569.3)$
   - ii $(0.000000513)(62.3 \times 10^7)$
   - iii $28401 + (5.78 \times 10^4)$
   - iv $63.25/(4.17 \times 10^{-3})$

   B) The sides of a small rectangular box are measured to be 1.80 ± 0.01 cm , 2.05 ± 0.02 cm, and 3.1 ± 0.1 cm long. Calculate its volume and uncertainty in cubic centimeters.

2. A) Calculate the following, round off to the correct number of significant figures, and express your result in scientific notation:
   - i $(2.00 \times 10^4)(6.10 \times 10^{-2})$
   - ii $(3.141592)(4.00 \times 10^5)$
   - iii $(2.32 \times 10^3)/(1.16 \times 10^8)$
   - iv $(5.14 \times 10^3) + (2.78 \times 10^2)$
   - v $(1.99 \times 10^2) + (9.99 \times 10^{-5})$

   B) A car engine moves a piston with a circular cross section of 7.500 ± 0.002 cm diameter a distance of 3.250 ± 0.001 cm to compress the gas in the cylinder. By what amount is the gas decreased in volume in cubic centimeters? Find the uncertainty in this volume.