PHYS 101H Hwk-1 Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

POEP Q11. Suppose that your car will not start and you form the hypothesis that the battery is dead. How would you test this hypothesis? Explain. (See everyday phenomenon box 1.1.)

POEP Q17. Suppose that you are told that speed is defined by the relationship *s* = *dlt,* where s represents speed, *d* represents distance, and *t* represents time. State this relationship in words, using no mathematical symbols.

POEP Q24 A pirate map indicates that a treasure is buried 50 paces due east and 120 paces due north of a big rock. Will you know where to dig? Explain.

POEP E3. It is estimated that five large pizzas are about right to serve a physics club meeting of 30 students. How many pizzas would be required if the group grew to 48 students?

POEP E6. A book is 240 mm in width. What is this width in centime­

ters? In meters?

OS P7. Mount Everest, at 29,028 feet, is the tallest mountain on the Earth. What is its height in kilometers? (Assume that 1 kilometer equals 3,281 feet.)

POEP E12. A common speed limit in Vancouver, British Columbia, is 80 kmfhr. If you are going 55 MPH, are you speeding? Show by converting 55 MPH to km/H, using the conversion factors on the inside front cover.

POEP E15. If the area of a square has increased by a factor of 9, by how much has each side increased?

POEP E16. A cube has a certain volume. If the length of each side is doubled, by what factor will the volume increase?