

## Physics 151 Class Exercise: Working with Units

- 1) An old tradition in Physics classes is to take unit conversion to a ludicrous extreme by working with the units the furlong and the fortnight. They are defined as:

$$1 \text{ furlong} = 1/8 \text{ mile}$$

1 fortnight = 14 days

Express each of the following quantities in terms of these units using scientific notation.

- a) The height of the Eiffel Tower 301 m
  - b) The world record for running the mile 3.74 minutes
  - c) The speed limit 55 mi/hr
  - d) The acceleration of gravity  $9.81 \text{ m/s}^2$

2. Calculate the volume of a geometrical shape that has a surface area of  $3.76 \text{ m}^2$  if the shape is ...

a) a sphere

b) a cube

3. How long is a microcentury?