

Homework #3
Unit Conversions

Assigned 3/1/13. Due 3/8/13.

1. Convert 5 mm to inches .
2. Convert 10 N to lb_f .
3. Convert 25 slug to kg .
4. Convert 6 hp to W .
5. Wind power over the surface area of a rotor is $2.4 \frac{\text{kW}}{\text{m}^2}$. Convert this quantity to $\frac{\text{hp}}{\text{ft}^2}$.
6. A passenger automobile has fuel economy rating of $29 \frac{\text{mi}}{\text{gal}}$ for highway driving. What is this rating in units of $\frac{\text{km}}{\text{L}}$.
7. A tornado has peak wind speed of 318 mph . Express this velocity in $\frac{\text{km}}{\text{h}}$ and $\frac{\text{ft}}{\text{s}}$.