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NPRE 247

Quiz 3

1. This is the link for the issue I opened on GitHub.

https://github.com/munkm/npre247/issues/31#issue-1560911731

2. Concrete has a density of 2.35 g/cc & and an H content of .00688 by weight fraction.

$$\frac{2.35\ g\ concrete}{1\ cc} * \frac{.00688\ g\ H}{1\ g\ concrete} * \frac{1\ mol\ H}{1.00794\ g\ H} * \frac{6.022e23\ atoms\ H}{1\ mol\ H} = 9.66e21 \frac{atoms\ H}{cc}$$

3. You cannot use mass and atoms percent interchangeably because atom percent refers to the total number of atoms and weight refers to the total weight. For example, in H_2O, the atom percent of O is 33%, but the weight percent is 88.89%. The only time you can use these two percents interchangeably, is when you have a completely homogenous substance. The weight of atoms is different from their chemical compositions in molecules.

4. The most challenging this this week was the conversion of mass density to atoms of each type of Uranium.