HOMEWORK ??? 5.4 - Making Conversions.pdf

3. Hong is a building contractor. The building code in his area requires that roofs be built to withstand 30 pounds of weight per square foot of horizontal area.

   a) How many kilograms per square metre is this?

   b) After a snowfall, a square foot of flat roof covered with snow has a weight of 18.1 pounds pressing on it. If the flat area of the roof of a house is 1700 square feet, what is the weight of the snow on the roof:

      i) in pounds? ii) in kilograms?

$\frac{30\,lbs}{ft^2} \times \frac{1\,kg}{2.2\,lbs} \times \frac{3.2808^2\,ft^2}{1\,m^2} = 146.8\,\frac{kg}{m^2}$

a) $1700\,ft^2 \times \frac{18.1\,lbs}{ft^2} = 30\,770\,lbs$

b) $30\,770\,lbs \times \frac{1\,kg}{2.2\,lbs} = 13\,986.36\,kg$

5. Craig and Genevieve have purchased 26 cases of birdseed. Each case contains 16 boxes that weigh 20 ounces each. How much do the 26 cases weigh:

a) in pounds?

b) in kilograms?

5.4 MAKING CONVERSIONS

BUILD YOUR SKILLS, PAGE 215

a) TOTAL ⇒ 16 x 20 = 320 oz

$320\text{ oz} \times \frac{1\text{ lbs}}{16\text{ oz}} = 20\text{ lbs}$

x 26

520 lbs

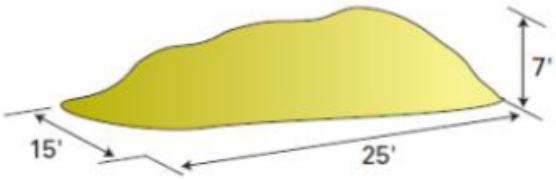
b) $20\text{ lbs} \times \frac{1\text{ kg}}{2.2\text{ lbs}}$

= 9.1 kg

x 26

236.4 kg

6. The conversion factor for changing cubic metres of wheat to tonnes is 0.778. Frank has been told that he can estimate the volume of grain dumped on the ground by using the formula $V = l \times w \times h \times 0.5$. If the length of the pile is 25 feet, the width is 15 feet, and the height is approximately 7 feet, how many bushels of wheat are in the pile? (1 tonne of wheat contains approximately 36.744 bushels.)



1) $ft^3 \rightarrow m^3$
2) $m^3 \rightarrow t$
3) $t \rightarrow bu$

$V = 25 \times 15 \times 7 \times 0.5$

$V = 1312.5\ ft^3$

① $1312.5\ ft^3 \times \frac{1\ m^3}{35.3147\ ft^3} = 37.2\ m^3$

② $37.2\ m^3 \times \frac{0.778\ t}{1\ m^3} = 28.9\ t$

③ $28.9\ t \times \frac{36.744\ bu}{1\ t} = 1062.5\ bu$

Review: Chapter 5...Mass, Temp and Volume

- convert ^{o}C <--> ^{o}F
- convert imperial masses (oz, lb, tn)
- convert imperial <--> metric masses
- convert mass <--> volume

NOTE: know the bushel

READY FOR THE TEST ON... Wednesday!!!

Geo_Mea_Fin 10 - Conversion Tables and Formula Sheet (Chp4_5).pdf

5.4 - Practice Problems.doc

Chapter 5 Sample Test.pdf

*** Corrections... MC #3 → 7.2°C
OR #22 → 8.3°C ≈ 80.6°F

5.4 - Making Conversions.pdf

5.4 - Practice Problems.doc

Chapter 5 Sample Test.pdf

Geo_Mea_Fin 10 - Conversion Tables and Formula Sheet (Chp4_5).pdf