NAME: **HONORS CHEMISTRY**

SECTION: Pairs/Check: Factor Label Review

Nonsense words taken from the poem “Jabberwocky” (from Lewis Carroll’s *Through the Looking Glass*)

There are 20 tumtum trees in the tulgey wood.

In each tulgey wood is one frumious Bandersnatch.

There are 5 slithy toves in 2 borogoves.

There are 2 mome raths per Jabberwock.

There are 2 Jubjub birds in 200 tumtum trees.

There are 200 mome raths in each borogove.

There are 5 Jubjub birds per slithy tove.

A General Process for Problem Solving

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| 1. List what you know.   1. What are you solving for? 2. What are you given? 3. Conversion factors? | 2. Set up the problem.   1. X what you’re solving for = what you’re given 2. All factors should cancel out to give units of answer | 3. Estimate and calculate.   1. Is the answer reasonable? 2. Use significant figures 3. Appropriate units |

Directions:

1. Take turns solving the problems--one partner completes the odd problems, while the other partner completes the even problems. Use the conversion factors listed above and dimensional analysis to solve the problems. Report your answer with an appropriate unit. Show all your work.
2. After each problem, discuss the answer with your partner. If both partners agree on the answer, both students initial the answers. If an agreement can’t be reached, both partners raise their hands to get the teacher’s attention.
3. Complete the self-evaluation.
4. How many tumtum trees are needed if there are 102 Jubjub birds?
5. If there are 7.2 borogoves, how many slithy toves are present?
6. There are 9420 tumtum trees. Convert this to tulgey woods.
7. If there are 55 frumious Bandersnatches, how many Jubjub birds are present?
8. You locate 12 tulgey woods. How many Jubjub birds should you expect to find?
9. 56 Jabberwocks are present. How many borogoves does this correspond to?

CHALLENGE PROBLEMS

Answer Key

1. 1020 tum tum trees
2. 18 slithy toves
3. 471 tulgey woods
4. 11 jubjub birds
5. 2.4 jubjub birds
6. 0.56 borogoves
7. If there are 5 frumious Bandersnatches, how many Jabberwocks should there be?
8. If there are 75 mome raths, how many furious Bandersnatches will you find?

The purpose of this assignment was to: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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| Did I: | Circle the appropriate response: |
| Clearly identify the errors? | Always Sometimes Rarely |
| Listen while my partner explained? | Always Sometimes Rarely |
| Give my partner positive support? | Always Sometimes Rarely |
| Stay on task during the assignment? | Always Sometimes Rarely |
| Use encouraging and polite words? | Always Sometimes Rarely |
| Record my work on the paper? | Always Sometimes Rarely |
| Demonstrate an understanding of the material? | Yes No |

Comments: