Homework 4

1. A besieged town, containing 22,400 inhabitants, has provisions to last 3 weeks; how many must be sent away that they may be able to hold out 7 weeks? [1]

2. If 8 workers in 24 days working 10 hours a day can reap 48 acres of wheat, how many acres could 12 workers reap in 20 days of 12 hours each?

3. If a staff of 4ft casts a shadow 7ft in length, what is the height of a tower which casts a shadow of 198ft at the same time? [2]

4. A homeowner sells their house at a loss of 20%. If the selling price was $60,000.00, what was the original price of the home?

5. In the erection of a house I paid twice as much for material as for labor. Had I paid 6% more for material, and 9% more for labor, my house would have cost $1284.00; what was its cost?[2].

6. There are approximately 7.5 billion people on the planet. Write this number in scientific notation.

7. Five friends eat together at a restaurant. If their bill, including all taxes, is $75.17 and they wish to leave a 20% tip, what will the total bill be?

8. Suppose the five friends in the previous question split the bill equally. What is each friend's share?

9. Last year the Maryville College woods was determined to be home to 250 box turtles. If the box turtle population has increased by 5%, what is the current population?

10. Three people are working together on a class project. To complete the project, they need to purchase glitter, glue, and a blank T-Shirt. Glitter costs $1.75 per container, glue is $1.25 per bottle, and a blank T-Shirt costs $6.00. How much must each student contribute to purchase the supplies?

11. Floor*Mart offers two containers of orange juice. One is a 64oz container which costs $5.25 and the other is a 32oz container which costs $2.25. Which container of orange juice is the better buy?

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[1] Transcribed from: *A Treatise on Arithmetic* by J. H. Smith. 1878
[2] Transcribed from: *The Proressive Higher Arithmetic* edited by Daniel Fish. 1878