

“More Is Less ... Or Is It?” and the *Common Core Math Standards*

Fourth Grade

Number & Operations in Base Ten

Generalize place value understanding for multi-digit whole numbers.

CCSS.MATH.CONTENT.4.NBT.A.3

Use place value understanding to round multi-digit whole numbers to any place.

(Tommy’s Math – p.57)

Seeing the relationship between numbers really helped Tommy with his mental Calculations. He couldn’t divide \$5.00 by 24 very easily in his head, but 24 is close to the Number 25. He knew there are four 25s, or quarters, in a dollar, and there are five \$1.00s in \$5.00.

Number & Operations - Fractions

Build fractions from unit fractions.

CCSS.MATH.CONTENT.4.NF.B.3.A

Understand addition and subtraction of fractions as joining and separating parts referring to the same whole.

(Tommy’s adding of 2 servings: $\frac{3}{4} + \frac{3}{4} = \frac{6}{4}$ in Chapter 5, pg. 20.

Also refer to the author-created Cosmos Crunch Nutritional Label)

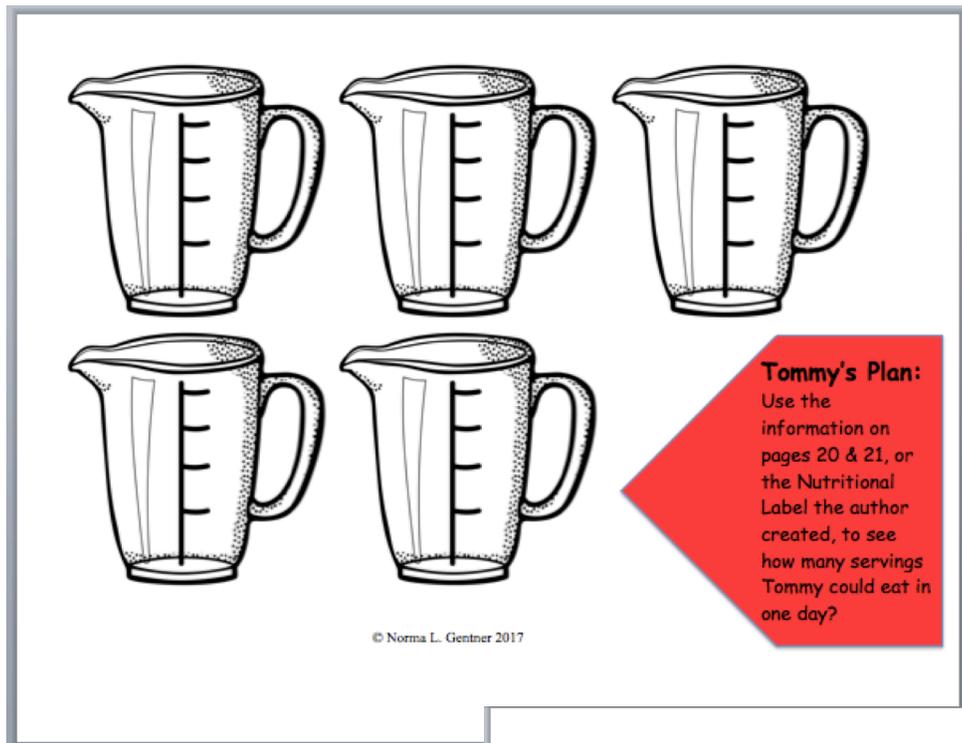
| Cosmos Crunch | | |
|---------------------------|--------------|----------------------------------|
| Serving Size | 3/4 cup | |
| Servings Per Container | 18 | |
| Amount Per Serving | | |
| | Cereal Alone | With ½ Cup Vitamin A&D Skim Milk |
| Calories | 110 | 150 |
| Calories from fat | 15 | 15 |
| Total Fat | 1.5g | |
| Cholesterol | 0 mg | |
| Sodium | 200 mg | |
| Potassium | 55 mg | |
| Total Carbohydrate | 23 g | |
| Dietary Fiber | 1 g | |
| Sugars | 12 g | |
| Other Carbohydrate | 10 g | |
| Protein | 2 g | |

CCSS.MATH.CONTENT.4.NF.B.3.C

Add and subtract mixed numbers with like denominators, e.g., by replacing each mixed number with an equivalent fraction, and/or by using properties of operations and the relationship between addition and subtraction.

$$1 \frac{1}{2} \text{ cups or } \frac{6}{4} \text{ (2 servings)} + \frac{3}{4} \text{ cup (1 serving)} + 1 \frac{1}{2} \text{ cups or } \frac{6}{4} \text{ (2 servings)} + \frac{3}{4} \text{ cup (1 serving)} = 6 \text{ servings}$$

Color $\frac{3}{4}$ of the first cup blue, and write a #1 (serving). Color the top $\frac{1}{4}$ of that cup, and the bottom $\frac{2}{4}$ of the second cup orange. Write #2 (servings). Color the top $\frac{2}{4}$ of the second cup green, and the bottom $\frac{1}{4}$ of the third cup green as well. Write #3 (servings). Continue on until the students record the 6 servings that Tommy ate in one day.



Tommy's Plan:
Use the information on pages 20 & 21, or the Nutritional Label the author created, to see how many servings Tommy could eat in one day?

Name _____ Date _____

Why did the author say it would take Tommy 3 days to vaporize the contents of one 18 ounce box of *Cosmos Crunch* cereal? (Explain. Show your work.)

CCSS.MATH.CONTENT.4.NF.B.3.D

Solve word problems involving addition and subtraction of fractions referring to the same whole and having like denominators, e.g., by using visual fraction models and equations to represent the problem.

(Tommy's Plan – Chapter 5, p.20)

'If he ate one bowl at breakfast, that would be two servings. He could take one serving to school for a snack. He'd have another snack after school, and eat one more bowl before bedtime. So, if his calculations were right, he could eat six servings per day! At that rate, he could vaporize the contents of the box, all 18 servings, in three days.'

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Cosmos Crunch

Serving Size 3/4 cup

Servings Per Container 18

Amount Per Serving

| | Cereal Alone | With ½ Cup Vitamin A&D Skim Milk |
|-------------------|-------------------------|---|
| Calories | 110 | 150 |
| Calories from fat | 15 | 15 |

Total Fat 1.5g

Cholesterol 0 mg

Sodium 200 mg

Potassium 55 mg

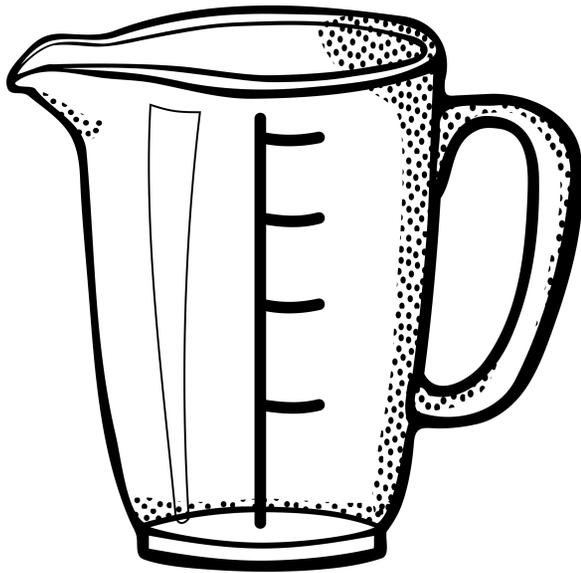
Total Carbohydrate 23 g

Dietary Fiber 1 g

Sugars 12 g

Other Carbohydrate 10 g

Protein 2 g



Tommy's Plan:
Use the information on pages 20 & 21, or the Nutritional Label the author created, to see how many servings Tommy could eat in one day?

Name _____ Date _____

Why did the author say it would take Tommy 3 days to *vaporize the contents* of one 18 ounce box of *Cosmos Crunch* cereal? (Explain. Show your work.)
