

Mr. Tu's Excellent Examples

Module 13 Chocolatier



Applying Lesson 13.1

1. A small box of chocolates contains five chocolates. Three of the chocolates are filled with lemon crème and two of the chocolates contain a walnut. What fractional part of the chocolates contains a walnut?

$\frac{2}{5}$ of the chocolates in the box contain a walnut.

2. Using the information in Problem 1, what is the ratio of lemon crème chocolates to chocolates containing a walnut?

The ratio of lemon crème chocolates to chocolates containing a walnut is 3:2.

3. Susie estimates that two out of every 100 chocolates she prepares have to be thrown away because of poor quality. What percentage of her chocolates is she throwing away?

$$\frac{2}{100} = 2\%$$

Susie is throwing away 2% of her chocolates.

Applying Lesson 13.2

1. Susie is preparing chocolates in a mold that has 10 rows with 10 sections in each row for a total of 100 chocolates. Twenty-five of the chocolates in the mold have a cherry filling. Write a decimal to represent the part of the mold that contains chocolates with a cherry filling.

.25

2. Three out of every 10 chocolates in a box are made of dark chocolate. What fractional part of the box of chocolates is dark chocolate? Write the fraction as a decimal and a percent.

$$\frac{3}{10} = .30 = 30\%$$

3. The quantities in many recipes are expressed in fractions of one cup. $\frac{1}{4}$, $\frac{1}{2}$, and $\frac{3}{4}$ are benchmark fractions for these measurements. What are the decimal and percentage equivalents for these benchmark fractions?

$$\frac{1}{4} = .25 = 25\% \quad \frac{1}{2} = .5 = 50\% \quad \frac{3}{4} = .75 = 75\%$$

Applying Lesson 13.3

1. Susie is preparing chocolates in a mold that has six rows of six chocolates each (36 total). She wants to determine different ways of packaging the chocolates with no chocolates left over. She wants each package to contain the same number of chocolates. What are the packaging options? List the possible number of packages and the number of chocolates each package would contain.

1 package of 36 chocolates
2 packages of 18 chocolates
3 packages of 12 chocolates
4 packages of 9 chocolates
6 packages of 6 chocolates
9 packages of 4 chocolates
12 packages of 3 chocolates
18 packages of 2 chocolates
36 packages of 1 chocolate

- Susie has prepared two batches of chocolates. One batch contains 81 dark chocolates (a 9 x 9 mold) and the other batch contains 36 milk chocolates (a 6 x 6 mold). Susie wants to create combination boxes of chocolates, and she wants to use all of the chocolates. Susie wants each box to have identical contents, and she wants to have as many boxes as possible. What is the largest number of identical boxes she can create? How many milk chocolates and how many dark chocolates will each box contain?

The largest number of boxes she can create is nine boxes.

Each box will contain four milk chocolates and nine dark chocolates

Applying Lesson 13.4

- Susie is thinking about making a very large box of chocolates that contains an equal number of milk chocolates and dark chocolates. She wants to prepare her dark chocolates in a nine chocolate mold and her milk chocolates in a 12 chocolate mold. She plans on having all the chocolates from a mold go in the same box of chocolates. What is the smallest number of each type of chocolates she must put in the box?

The LCM of nine and 12 is 36.

The box will contain 36 dark chocolates and 36 milk chocolates.

- Susie has prepared 81 crème filled milk chocolates, 36 milk chocolates containing a walnut, and 18 cherry filled dark chocolates. She wants to use all the chocolates she has prepared. What is the smallest number of boxes Susie can create that will have an identical combination of chocolates? How many of each chocolate will each box contain?

Nine boxes is the smallest number of boxes Susie can create.

Each box will contain nine crème filled milk chocolates, four milk chocolates containing walnuts, and two cherry filled dark chocolates.

Applying Lesson 13.5

1. A recipe calls for $5\frac{1}{2}$ cups of cocoa beans. Susie needs to use her $\frac{1}{2}$ cup measuring cup because it is the only measuring cup available. How many $\frac{1}{2}$ cups does she need to use?

$$5\frac{1}{2} = \frac{11}{2}$$

Susie needs to use 11 of the $\frac{1}{2}$ cup measures.

2. Susie's recipe calls for $\frac{1}{4}$ cup of sugar to make 12 chocolates. She wants to make five times that number of chocolates. How much sugar does she need? Write your answer as a mixed number.

$$\frac{1}{4} \times 5 = \frac{5}{4} = 1\frac{1}{4}$$

Susie will need $1\frac{1}{4}$ cups of sugar.