Section C: Practice Problems

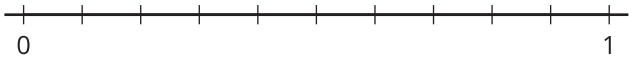
1. Andre is building a tower out of different foam blocks. These blocks come in three different thicknesses: $\frac{1}{2}$-foot, $\frac{1}{4}$-foot, and $\frac{1}{8}$-foot.

   Andre stacks two $\frac{1}{2}$-foot blocks, two $\frac{1}{4}$-foot blocks, and two $\frac{1}{8}$-foot blocks to create a tower. What will the height of the tower be in feet? Explain or show how you know.

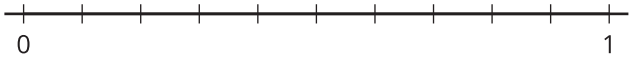
(From Unit 3, Lesson 15.)

2. Find the value of each of the following sums. Show your reasoning. Use number lines if you find them helpful.

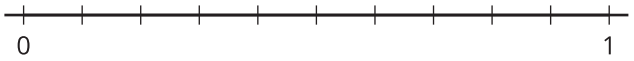
   a. $\frac{1}{10} + \frac{3}{100}$

   b. $\frac{24}{100} + \frac{4}{10}$

   c. $\frac{7}{10} + \frac{13}{100}$

(From Unit 3, Lesson 16.)

3. Is the value of each expression greater than, less than or equal to 1? Explain how you know.

   a. $\frac{3}{10} + \frac{7}{100}$

   b. $\frac{13}{10} + \frac{7}{100}$

   c. $\frac{30}{100} + \frac{7}{10}$

(From Unit 3, Lesson 17.)

4. Diego and Lin continued to play with their coins.

   Diego said that he has exactly 3 coins whose thickness adds up to $\frac{50}{100}$ cm. What coins does Diego have? Explain or show your reasoning.

coin	thickness in cm
1 centavo	$\frac{12}{100}$
10 centavos	$\frac{22}{100}$
1 peso	$\frac{16}{100}$
2 pesos	$\frac{14}{100}$
5 pesos	$\frac{2}{10}$
20 pesos	$\frac{25}{100}$

(From Unit 3, Lesson 18.)

5. **Exploration**

   A chocolate cake recipe calls for 2 cups of flour. You gather your measuring cups and notice you have these sizes: $\frac{1}{2}$ cup, $\frac{1}{3}$ cup, $\frac{1}{4}$ cup, and $\frac{1}{6}$ cup.

   a. What are the different ways you could use all 4 measuring cups to measure 2 cups of flour?

   b. What are other ways you could use just some of the 4 measuring cups to measure exactly 2 cups of flour?

6. **Exploration**

A dime is worth $\frac{1}{10}$ of a dollar and a penny is worth $\frac{1}{100}$ of a dollar.

a. If I have $\frac{89}{100}$ of a dollar, how many different combinations of dimes and pennies could I have? Use equations to show your reasoning.

b. A nickel is worth $\frac{5}{100}$ of a dollar. How many different combinations of dimes, nickels and pennies could I have if I still have $\frac{89}{100}$ of a dollar? Use equations to show your reasoning.