Materials

- **BLM** Percents – Special Fractional Parts
- **BLM** Percents – Special Fractional Parts (grid)
- yellow or orange crayon

Math Vocabulary

decimal
decimal point
tenths
hundredths
thousandths
compare
order
equivalent
percent

Literature Vocabulary

short-term
long-term
purchases/expenses
income
counterfeit
symbolize
contribution

ELPS (*English Language Proficiency Standards*)
1A, 1D, 1G, 2B, 2C, 2F, 2I, 3B, 3E, 3H, 3J, 4C, 4F, 4I, 5B, 5C, 5F, 5G

CCRS (*College and Career Readiness Standards*)
VIII – A1, S2, A3, A4, A5, B1, B2, C1, C2, C3
IX – A1, A2, A3, B1, B2, C1, C2, C3
X – B1

Unit 1, Lesson 3   Grades 5-6
TV Lesson

Math Objectives:

- Compare and order two decimals to the thousandths and represent comparisons using the symbols >, <, or =.
- Represent ratios and percents with concrete models, fractions, and decimals.
- Represent benchmark fractions and percents such as 1%, 10%, 25%, 33 1/3%, and multiples of these values using 10 by 10 grids, strip diagrams, number lines, and numbers.
- Generate equivalent forms of fractions, decimals, and percents using real-world problems, including problems that involve money.
- Use equivalent fractions, decimals, and percents to show equal parts of the same whole.

Language Objectives:

- Use the math vocabulary during the activity.
- Discuss solution strategies.

Building Background

Finally we are going to work with the last word on our word wall – PERCENTS.

Per – cent, per 100. You worked with hundredths during your Classroom Lesson today. Percents are equivalent to hundredths. Let's find equivalent fractions, decimals and percents to show equal parts of the same whole.

First, look at the **BLM Special Fractions Parts (grid)**. Tell your Classroom Teacher everything that you can about this grid. *(Give a bit of a wait.)*

Things that I hope you observed are:

- This is a 10 x 10 grid which matches the number of squares in the top of the FLAT you were using in class – 100 squares.
- The grid is divided into four quadrants, or four equal pieces. By the way, "quadrant" is simply another word for fourths. The grid is divided into fourths.
- Did you notice that each quadrant is a 5 x 5 square? There are 25 squares in each quadrant.

You should have a light colored crayon which you'll use to color in the different portions of this hundred grid. Because I want you to see some very special relationships, we'll color inside one quadrant at a time as we create our equivalent fractions, decimals and percents.

41

--

OK, let's get started. You'll need your Percents – Special Fractional Parts record sheet.

Comprehensible Input
(As you work through the sheet with the students, remind them that the % sign can be used as a mathematical symbol instead of writing out percent each time. Remember to stay within the upper left quadrant as you color in numbers one – five. You want the students to see the 1/4 of the grid. It's much more important for students to visualize these benchmark percents than it is to teach them how to divide to find a percent. This is what helps students to develop number sense.)

(For six and seven, be sure to go to the upper right quadrant so students see the 50% and readily see that is half.)

(For eight, go to the lower left quadrant.)

(Finish the task in the lower right quadrant.)

Ask students to compare the following percents on the back of their BLM. Check each one after you've paused and given them time to write the comparison statements.

20% compared to 75%
25% compared to 10%
0.33 to 33%
If you have more time, give them comparisons with other percents that you have created on the grid.

Close with this comparison – do NOT check:
6% compared to 60%
Ask them now to compare 0.06 to 0.60.
Ask them to compare 6/100 to 60/100.

Tell them that after you leave them they will discuss as a class how they know their comparisons are true. What visuals do they see in their mind as they think about these comparisons?

Captain's Corner
How has the Measurement Lab modeled equivalent fractions during this unit?

Objectives:
Read through the math and language objectives, making sure that students understand how they accomplished each.

Teacher Note
Today we are helping students build the visual of the relationship between fractions, decimals and percents. Please do not show any way of arithmetically achieving the decimal – just models and relationships.

Percents – Special Fractional Parts

1. Color in 0.01. Write as a fraction with a denominator of 100._____

   What percent of the grid does this represent? _____

2. Color in 0.05. Write as a fraction with a denominator of 100._____

   What percent of the grid does this represent? _____

3. Color in 0.10. Write as a fraction with a denominator of 100. _____

   What percent of the grid does this represent? _____

4. *Color in 0.20. Write as a fraction with a denominator of 100. _____

   What percent of the grid does this represent? _____

5. Color in 0.25. Write as a fraction with a denominator of 100._____

   What percent of the grid does this represent? _____

   Look at the grid. 25% is a benchmark percent. Find another fraction to represent this

   amount, a fraction in its simplest terms. _____

6. *Color in 0.33 of the grid. Write as a fraction with a denominator of 100. _____

   What percent of the grid does this represent? _____

7. Color in 0.50 of the grid. Write as a fraction with a denominator of 100. _____

   What percent of the grid does this represent? _____

   Look at the grid. 50% is a benchmark percent. Find another fraction to represent this

   amount, a fraction in its simplest terms. _____

8. Color in 0.75 of the grid. Write as a fraction with a denominator of 100. _____

   What percent of the grid does this represent? _____

   Look at the grid. 75% is a benchmark percent. Find another fraction to represent this

   amount, a fraction in its simplest terms. _____

9. Color in 1.00 of the grid. Write as a fraction with a denominator of 100. _____

   What percent of the grid does this represent? _____

   Look at the grid. 100% is a benchmark percent. If you are giving 100% of your effort,

   how much of your effort are you giving? _____

   What is another way to represent 100%? _____

Name _____

1. Colorea 0.01. Escribe como una fracción con un denominador de 100._____

   ¿Qué porcentaje de la cuadrícula representa? _____

2. Colorea 0.05. Escribe como una fracción con un denominador de 100._____

   ¿Qué porcentaje de la cuadrícula representa? _____

3. Colorea 0.10. Escribe como una fracción con un denominador de 100. _____

   ¿Qué porcentaje de la cuadrícula representa? _____

4. *Colorea 0.20. Escribe como una fracción con un denominador de 100. _____

   ¿Qué porcentaje de la cuadrícula representa? _____

5. Colorea 0.25. Escribe como una fracción con un denominador de 100._____

   ¿Qué porcentaje de la cuadrícula representa? _____

   Mira la cuadrícula.. 25% es un porcentaje de referencia (*benchmark*). Busca otra fracción

   para esta misma cantidad, una fracción en su forma más simple. _____

6. *Colorea 0.33 de la cuadrícula. Escribe como una fracción con un denominador de

   100._____   ¿Qué porcentaje de la cuadrícula representa? _____

7. Colorea 0.50 de la cuadrícula. Escribe como una fracción con un denominador de

   100._____   ¿Qué porcentaje de la cuadrícula representa? _____

   Mira la cuadrícula.. 50% es un porcentaje de referencia (*benchmark*). Busca otra fracción

   para esta misma cantidad, una fracción en su forma más simple. _____

8. Color in 0.75 de la cuadrícula. Escribe como una fracción con un denominador de

   100._____   ¿Qué porcentaje de la cuadrícula representa? _____

   Mira la cuadrícula. 75% es un porcentaje de referencia (*benchmark*). Busca otra fracción

   para esta misma cantidad, una fracción en su forma más simple. _____

9. Color in 1.00 de la cuadrícula. Escribe como una fracción con un denominador de

   100._____   ¿Qué porcentaje de la cuadrícula representa? _____

Mira la cuadrícula. 75% es un porcentaje de referencia (*benchmark*). Si le pones 100% de tu
esfuerzo, ¿cuánto de tu esfuerzo estás poniendo? _____¿Qué otra manera
de representar 100% hay?_____

Percents – Special Fractional Parts (grid)