January 28, 2021

6th Grade
Jan 28, 2021

Today we will:

-introduce "Math Masterpiece" Unit 2 project (6PR)

-watch video notes and do examples

-begin Reteach WS

HOMEWORK:

Reteach WS

Project due Feb 5

ALEKS assignment:
60 min and 5 topics
due Monday by
11:59pm

We are going to begin a project today that combines math with art! We will begin with a handout.

Please fill out the due date at the top to be Feb 5.

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Math Masterpieces!

6th Grade Math Project on Fractions, Decimals, and Percents

Let's turn math into art! There are many artists that use concepts of math to create their works. Artists like Piet Mondrian, Victor Vasarely, Ellsworth Kelly, Kenneth Noland, and Frank Stella use measurement and subdivision of the canvas to create their abstract works of art. We will look at some of these artists' works in class.

To prepare us for this task, we first need to practice finding equivalent fractions, decimals and percents. Let's do this together:

	Number of squares out of 100	Fraction	Decimal	Percent
1	75	3/4	0.75	75%
2	20	$\frac{1}{5} \times \frac{20}{20} = \frac{20}{100}$ 1/5	0.2	20%
3	30	$\frac{3}{10}$	0.3	30%
4		12/25		48%
5	60			
6				37%
7			0.56	
8	44			
9		23/25		
10		7/10		
11				91%

Now, let's make some abstract art!

Slide show

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PART ONE: Create your art

You will be able to create your own design on a chart with 100 squares. Color in all 100 squares, using crayons, colored pencils, or markers. After you create your design, you need to count how many of each color you have used and write it in pencil in the chart under your artwork. You will need to find the fraction, decimal, and percent form for each number you write.

Remember that all values in the number and percent columns should add to 100. That means you have 100 squares and all the colors add up to 100%. All of your numbers in the fraction and decimal columns should add to 1 (because all of your colors added together make one whole masterpiece!).

PART TWO: Written Summary

You will next describe in a paragraph (at least 5 sentences) how you decided on your design and the mathematical steps you took to find your fractions, decimals, and percents. Use the methods of writing that Ms Foster has given you so far. Your writing should be neat and your ideas clear.

GRADING

Your grade will be based on neatness of your design, your correct math, and your written summary. The rubric I will use is provided below. Use this to make sure your work is worth all 4s!

Good luck, and HAVE FUN! :)

Name _____ Homeroom_____ Date Due:_____

SPACE FOR A ROUGH DRAFT OF YOUR PARAGRAPH
This is REQUIRED. You must also have someone read your paragraph and make editing marks/comments. Person who edits must sign at the bottom of the page.

My Math Masterpiece!

Here is how I decided on my design and how I figured my fractions, decimals and percents:

Signature of proofreader: _____

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Evaluation

Your work be evaluated using the following Rubric:

	Poor 18	Satisfactory 23	Good 28	Exceptional 33
Fraction, decimal and percent analysis	Conversion analysis contains various errors	Conversion analysis contains minor errors	Conversion analysis correctly done, but columns do not sum to "one whole"	Conversion analysis correctly done and columns sum to "one whole"
Neatness and Creativity	No time or effort put into neatness and little creativity shown	Minimal effort shown in neatness and/or creativity	Work is neat; Creativity shown in creating mosaic	Work is extremely neat (a lot of time clearly spent to ensure neatness); Exceptional amount of creativity shown in creating mosaic
Written reflection of results	Reflection contains various mathematical errors and steps not explained	Reflection contains minor mathematical errors or steps not explained	Reflection well-written and accurate; explains steps taken to make conversions	Reflection well-written with in-depth; thoroughly explains steps taken to make conversions

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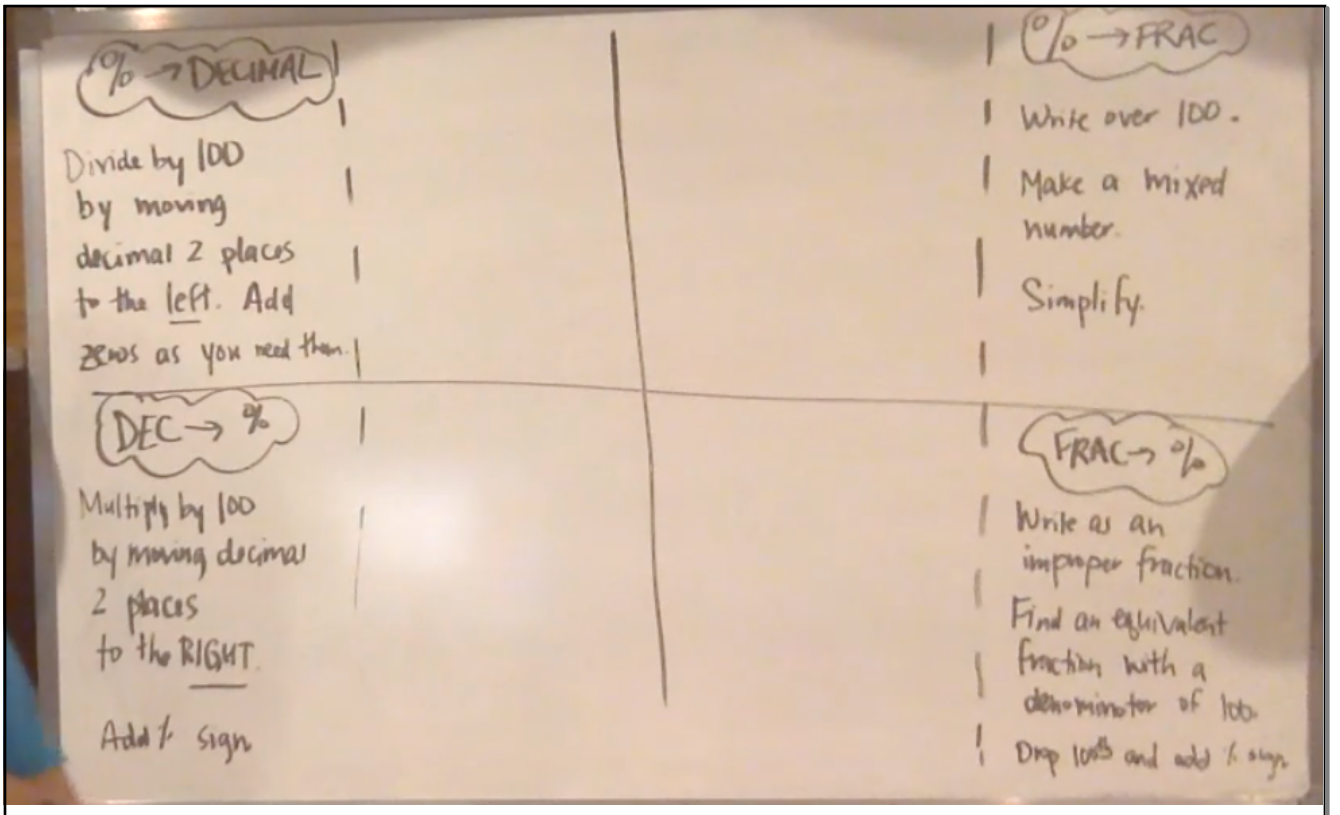

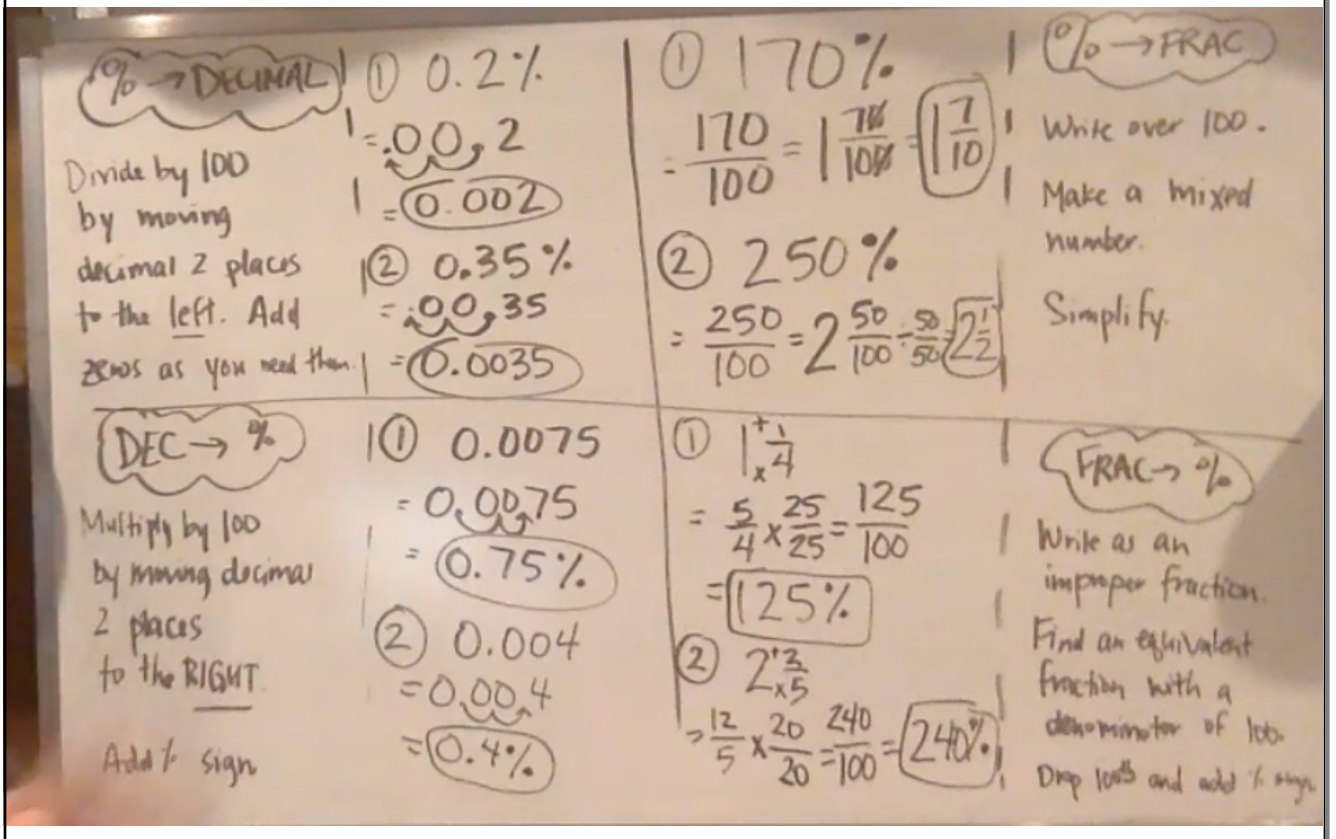
% → DECIMAL
Divide by 100 by moving decimal 2 places to the left. Add zeros as you need them.
① 0.2%
=.00,2
=0.002
② 0.35%
=.00,35
=0.0035
① 170%
= 170/100 = 1 70/100 = 1 7/10
② 250%
= 250/100 = 2 50/100 = 50/50 = 2 1/2
% → FRAC
Write over 100.
Make a mixed number.
Simplify.
DEC → %
Multiply by 100 by moving decimal 2 places to the RIGHT.
Add % sign
① 0.0075
=0.00,75
=0.75%
② 0.004
=0.00,4
=0.4%
① 1 1/4
= 5/4 x 25/25 = 125/100
=125%
② 2 3/5
= 12/5 x 20/20 = 240/100 = 240%
FRAC → %
Write as an improper fraction.
Find an equivalent fraction with a denominator of 100.
Drop 100's and add % sign.

230%

Dec: 230 → 2.30

Frac: $\frac{230}{100} \rightarrow \frac{30}{100} \div \frac{10}{10} = \frac{3}{10}$ → $2\frac{3}{10}$

0.0078

to percent:

0.0078 → 0.78%

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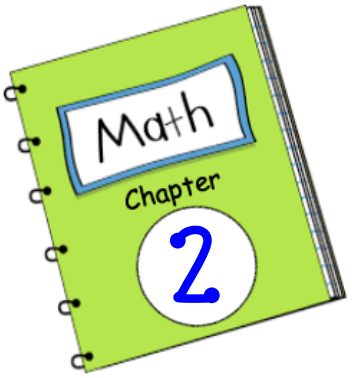

TITLE: Decimals, Fractions, and Percents

Date	Lesson	Topic/Assignment
1/4	1	Decimals and Fractions Video Notes
1/5	1	HOMEWORK: Pg 93 WS
1/5	1	CLASSWORK: Skills WS
1/6	1	CLASSWORK: Problem-Solving WS
1/7	2	Fractions and Percents Video Notes
1/8	2	HOMEWORK: Page 105 WS
1/11	3	Percents and Decimals Video Notes
1/12	3	HOMEWORK: Page 113
1/12	3	CLASSWORK: HW Practice WS
1/14	1-3	CLASSWORK: Percent Puzzle
1/28	4	Percents >100% and <1% Video Notes
1/29	4	HOMEWORK: Reteach WS

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Unit 2 Lesson 4 Reteach

Percents Greater Than 100% and Percents Less Than 1%

A percent greater than 100% equals a number greater than 1.

A percent less than 1% equals a number less than 0.01 or $\frac{1}{100}$.

Examples

Write each percent as a decimal and as a mixed number or fraction in simplest form.

280%

$280\% = \frac{280}{100}$ Definition of percent

$= 2.8$ or $2\frac{4}{5}$

0.12%

$0.12\% = \frac{0.12}{100}$ Definition of percent

$= 0.0012$ or $\frac{3}{2{,}500}$

Exercises

Write each percent as a decimal and as a mixed number or fraction in simplest form.

1. 200%

$= 2.00$

$= 2$

2. 750%

$= 7.50$

$= 7\frac{50}{100} \div -$

$=$

3. 325%

$= 3.25$

$= 3\frac{25}{100} \div -$

$=$

4. 0.3%

5. 0.8%

6. 0.48%

Examples

Write each decimal as a percent.

2.17

$2.17 = 217.$ Multiply by 100.

$= 217\%$

0.0034

$0.0034 = 000.34$ Multiply by 100.

$= 0.34\%$

Exercises

Write each decimal as a percent.

7. 2.6

8. 19

9. 5.14

10. 0.008

11. 0.0014

12. 0.0067