

Name: _____

Date: _____

Aim: How can we review decimals, fractions, and percents (day 2)?

DO NOW:

Rita said that decimals, fractions, and percents are just different ways to represent the same value.

Explain what Rita means. Justify your response.

Decimals, fractions, and percents can all be converted to one another.

$$\frac{1}{4} = 0.25 = 25\%$$

Converting between Fractions, Decimals, and Percents

Fractions → Decimals

Divide the numerator by the denominator.

a.) $\frac{1}{2}$

$$\begin{array}{r} 0.5 \\ 2 \overline{) 1.0} \\ \underline{10} \\ 0 \end{array}$$

b.) $\frac{3}{4}$

$$\begin{array}{r} 0.75 \\ 4 \overline{) 3.00} \\ \underline{28} \\ 20 \\ \underline{20} \\ 0 \end{array}$$

0.75

c.) $\frac{7}{8}$

$$\begin{array}{r} 0.875 \\ 8 \overline{) 7.000} \\ \underline{64} \\ 60 \\ \underline{56} \\ 40 \\ \underline{40} \\ 0 \end{array}$$

0.875

Decimals → Fractions

Read it, Write it, Simplify

a.) 0.67

$$\frac{67}{100}$$

b.) 0.2

$$\frac{2}{10} \rightarrow \frac{1}{5}$$

c.) 2.0

$$\frac{2}{1}$$

d.) 1.34

$$\frac{34}{100}$$

$$\frac{17}{50}$$

Decimals → Percents

Move decimal two to the right

a.) 0.67

↗

$$67\%$$

b.) 0.2

↗

$$20\%$$

c.) 2.0

↗

$$200\%$$

d.) 1.34

↗

$$134\%$$

dp

Percents → Decimals

Move decimal two to the left

a.) 35%

$$0.35$$

b.) 45%

$$0.45$$

c.) 132%

$$1.32$$

d.) 0.5%

$$0.005$$

dp

Fractions → Percents

- Method 1: Change to a decimal, then to a percent
- Method 2: use a proportion $\frac{a}{b} = \frac{x}{100}$

a.) $\frac{1}{2} \rightarrow 0.5 \rightarrow 50\%$

b.) $\frac{3}{4} \rightarrow 0.75 \rightarrow 75\%$

c.) $\frac{7}{8} \rightarrow 0.875 \rightarrow 87.5\%$

Percents → Fractions

Put $\frac{\%}{100}$ and simplify

a.) 50% $\frac{50}{100} \rightarrow \boxed{\frac{1}{2}}$

b.) 75% $\frac{75}{100} \rightarrow \boxed{\frac{3}{4}}$

c.) 175% $\rightarrow \frac{175}{100} \rightarrow \frac{75}{100} \rightarrow \boxed{\frac{3}{4}}$

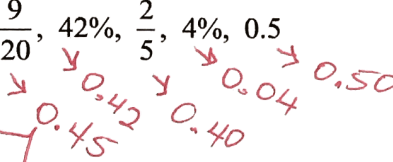
Complete the table below. Use the conversion methods to help you.

Fraction	Decimal	Percent
$\frac{1}{2}$	$\boxed{0.5}$	$\boxed{50\%}$
$\frac{72}{100} \rightarrow \boxed{\frac{18}{25}}$	0.72	$\boxed{72\%}$
$\frac{3}{8}$	$\boxed{0.375}$	$\boxed{37.5\%}$
$\frac{35}{100} \rightarrow \boxed{\frac{7}{20}}$	$\boxed{0.35}$	35%
$\frac{1}{4}$	$\boxed{0.25}$	$\boxed{25\%}$
$\frac{125}{100} \rightarrow \boxed{\frac{5}{4}}$	$\boxed{1.25}$	125%
$\frac{2}{1000} \rightarrow \boxed{\frac{1}{500}}$	0.002	$\boxed{0.2\%}$

Practice

1. Order the numbers from least to greatest. $\frac{9}{20}$, 42%, $\frac{2}{5}$, 4%, 0.5

4%, $\frac{2}{5}$, 42%, $\frac{9}{20}$, 0.5



2. Change 4% to a simplified fraction.

$$\frac{4}{100} = \frac{1}{25}$$

3. Change 29% to a decimal

0.29

4. Change 0.05 to a percent

5%

5. Change $\frac{3}{15}$ to a percent

$\frac{0.2}{15} \overline{)3.0}$ 20%

6. John got 32 questions correct on his 54 question science test. What grade did John receive on the test?

$\frac{32}{54}$ $54 \overline{)32.0}$ 0.592... 59%

7. Alex got 4 questions incorrect on her 16 question quiz. What grade did Alex give?

12 correct $\frac{12}{16} = \frac{3}{4}$ 75%



Fractions, Decimals, and Percents can all be

converted to one another. They are all representations of the same value.