# SUBJECT – MATHEMATICS

## GRADE – 6
## Chapter 2 – Lesson 3
## Relate Fractions, Decimals, and Percents

# Objective of Session

**To understand the relation between Fractions, Decimals and Percents**

# Vocabulary:

❖ **Fractions**

❖ **Decimals**

❖ **Percents**

# Let's Start.... Instructions

❖ **Complete the word wall activity**

❖ **3 Minutes to complete the activity**

❖ **Post the scores on the chat**

https://wordwall.net/resource/14851658/percentage-match-up

**INTRODUCTION**

As a fraction, $35\% = \frac{35}{100}$, or $\frac{7}{20}$.

As a decimal, $35\% = 0.35$.

**Learn** Relate Percents to Fractions and Decimals

By definition, a percent is a ratio that compares a number to 100. The percent 35% compares 35 to 100 as the ratio 35 : 100. In fraction form, this ratio is $\frac{35}{100}$ which means *thirty-five hundredths*. You can use the definition of percent, equivalent ratios, and place-value reasoning to write percents as both fractions and decimals.

Write 35% as a fraction.

$35\% = \frac{35}{100}$      Definition of percent      $\frac{35}{100} = \frac{7}{20}$

Write 35% as a decimal.

$35\% = \frac{35}{100} = 0.35$

Write 18% as a decimal and as a fraction in simplest form.

**Write each percent as a fraction in simplest form and as a decimal.** (Example 1)

**1.** 45%

**2.** 72%

**3.** 80%

**Guided Practice**

In a recent survey, 22% of E-mail users claimed to spend less time using E-mail because of spam. What fraction of E-mail users is this? What decimal is this?

https://www.liveworksheets.com/hp1926970sn

## INTRODUCTION

As a percent, $\frac{3}{20} = 15\%$.

As a decimal, $\frac{3}{20} = 0.15$.

**Learn** Relate Fractions to Percents and Decimals

You can also write fractions as percents and decimals.

Write $\frac{3}{20}$ as a percent.

$$\frac{3}{20} = \frac{\phantom{15}}{100}$$

$\times 5$

$$\frac{3}{20} = \frac{15}{100}$$

$\times 5$

As a percent, $\frac{3}{20} = 15\%$.

Write $\frac{3}{20}$ as a decimal.

$$\frac{3}{20} = \frac{15}{100} = 0.15$$

**Independent Practice**

Write each fraction as a percent and as a decimal. (Examples 2 and 3)

**4.** $\frac{3}{20}$

**6.** $\frac{5}{8}$

**8  Is not a factor of 100**

| | | |
|---|---|---|
| | | |

Write $\frac{4}{16}$ as a percent and as a decimal.

**16  Is not a factor of 100, but 4 is a factor**

|  |  |  |
|---|---|---|
|  |  |  |

**Guided Practice**

# Objective of Session

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# Vocabulary:

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# Let's Start….

## Instructions

❖ **Complete the Liveworksheet**

❖ **3 Minutes to complete the activity**

❖ **Post the scores on the chat**

https://www.liveworksheets.com/mp1239166ze

## Relate Decimals to Percents and Fractions

| Place Value Chart (Decimals) | | | | | | |
|---|---|---|---|---|---|---|
| Hundreds | Tens | Ones | . | Tenths | Hundredths | Thousandths |
| 100 | 10 | 1 | . | $\frac{1}{10}$ | $\frac{1}{100}$ | $\frac{1}{1000}$ |

**Introduction**

**0.7**

**0.25**

**0.125**

**Independent Practice**

Write each decimal as a percent and as a fraction in simplest form. (Example 4)

**7.** 0.89

**8.** 0.82

**9.** 0.65

# Let's Start…. Instructions

❖ **Complete the word wall activity**

❖ **3 Minutes to complete the activity**

❖ **Post the scores on the chat**

https://wordwall.net/resource/1365660/fractions-and-percentages

## Write Mixed Numbers as Percents

$3\frac{9}{13}$

Whole number — $2\frac{1}{7}$ — Fraction

$5\frac{1}{3}$

**INTRODUCTION**

## Write Mixed Numbers as Percents

$$2\frac{3}{4} = \frac{(4 \times 2) + 3}{4} = \frac{8 + 3}{4} = \frac{11}{4}$$

Mixed Number          Improper Fraction

**Independent Practice**

**Write the fraction below as Percent and as a decimal**

$$1\frac{3}{4}$$

**Independent Practice**

When blue whales feed, they can take in $1\frac{1}{25}$ times their body weight in food and water in one single gulp. What percent of their body weight is this?
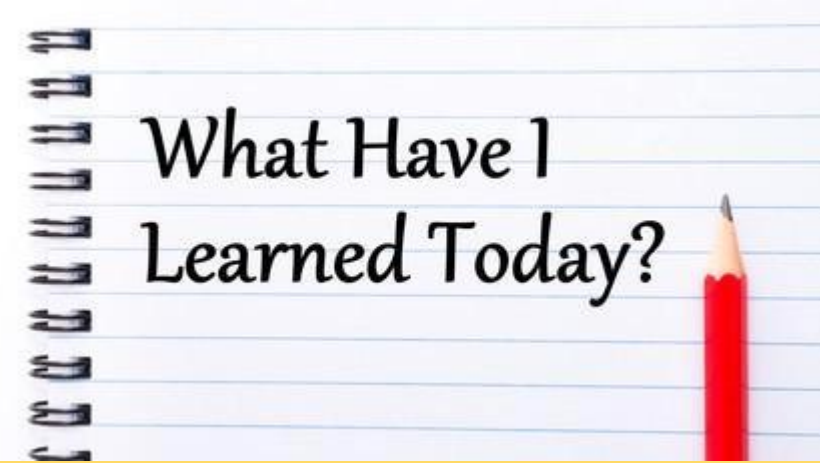
**Independent Practice**

**10.** About 0.41 of Hawaii's total area is water. Write 0.41 as a fraction and as a percent.

**11.** Over the course of the basketball season, Zane's free throw average went up by 30%. Write 30% as a fraction and as a decimal.

# What we learned today

| percentage | fraction | decimal |
|:---:|:---:|:---:|
| 30% | $\frac{3}{10}$ | 0.3 |

to go from a fraction to a percentage
we can **convert to a decimal** first

3/5 ⟶ 0.6 ⟶ 60%

# Plenary Activity

https://www.liveworksheets.com/vt2197374ut