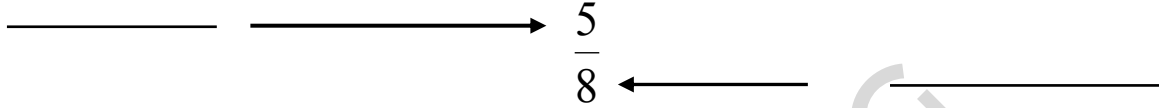
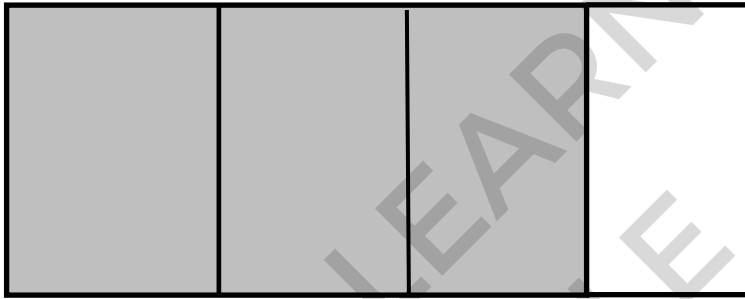


Introduction to Fractions and Mixed Numbers

- The parts of a fraction are (shown below):



- Fractions are used to indicate _____ of a whole.
- Use the picture below to write a fraction representing the shaded portion of the shape:



- The fraction $\frac{2}{7}$ represents _____ of _____ equal parts.
- Whole numbers can be thought of as fractions with a denominator of _____.
- Fraction notation represents the operation of _____.
- There are two rules to keep in mind when working with the value of zero in a fraction:
- For any nonzero value, b , $\frac{0}{b} = 0$. An example of this would be $\frac{0}{4} = 0$.
- For any value of a , $\frac{a}{0} = \text{undefined}$. An example of this would be $\frac{6}{0} = \text{undefined}$.
- Steps to multiply fractions:
 1. Multiply the _____.
 2. Multiply the _____.

- Multiply the following fraction: $\frac{2}{3} \cdot \frac{1}{5} = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$
- To find an equivalent fraction, you need to the numerator and the denominator by the nonzero whole number.
- Find an equivalent fraction for $\frac{2}{3} = \underline{\hspace{2cm}}$ by multiplying both the numerator and the denominator by 5.
- There are two steps to reducing fractions to lowest terms:
 1. Factor the and into prime factors.
 2. Use the fact that $\frac{k}{k} = 1$ and divide out all of the factors.
- What is the common factor that can be divided out of the fraction, $\frac{4}{12}$?
- What is $\frac{4}{12}$ in lowest terms?
- A mixed number is the sum of a and a fraction.
- To change a mixed number to an improper fraction, you need to:
 1. Multiply the whole number by the of the proper fraction.
 2. Add the of the proper fraction to this product.
 3. Write this over the denominator of the fraction.
- Change $3\frac{1}{2}$ to an improper fraction:

Multiply the whole number by the denominator: · =

 - Add the numerator to the product from above: + =
 - Write this sum over the denominator:

Decimals and Fractions

- To change from decimal numbers to fractions:
 - A terminating decimal number can be written in fraction form by writing a fraction with the following:
 - a _____ that consists of the whole number formed by all the digits of the decimal number
 - a _____ that is the power of ten that names the position of the last digit on the right
- To change from a fraction to a decimal number:
 - To change a fraction to decimal form, we divide the numerator by the denominator.
 - If the remainder is eventually 0, the decimal number is said to be _____.
 - If the remainder is never 0, the decimal number is said to be _____.
- Nonterminating decimal numbers can be _____ or nonrepeating.
- A _____ repeating decimal (also called an infinite repeating decimal number) has a repeating pattern to its digits.
- Every fraction with a whole number numerator and nonzero denominator is either terminating or repeating. Such numbers are called _____ numbers.
- Sometimes, changing fractions to decimal form may involve _____ the decimal form of a number and settling for an approximate answer. To have a more accurate answer, we may need to change the number from decimal form to _____ form and then perform the operations.

Decimal Numbers and Percents

- The word percent comes from the Latin *per centum*, meaning per _____.
- Percent means _____, or the ratio of a number to 100.
- The symbol _____ is called the percent sign. This sign has the same meaning as the $\frac{1}{100}$.
- Changing fractions with denominators of 100 to percents:
- Example: $\frac{25}{100} = 25\%$
The _____ did not change.
- Example: $\frac{3.8}{100} = 3.8\%$
The _____ is not changed, the decimal point doesn't move if the _____ is 100.
- To change a decimal to a percent:
 1. Move the decimal point two places to the _____.
 2. Write the _____ sign.
 - Example: $0.56 = 56\%$
 - Example: $0.345 = 34.5\%$
 - Example: $0.02 = 2\%$
- To change percents to a decimal number:
 1. Move the decimal two places to the _____.

2. Delete the _____ sign.

- Example: $97\% = 0.97$
- Example: $68.5\% = 0.685$
- Example: $0.64\% = 0.0064$

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Reading Graphs

- The Purposes of Four Types of Graphs
 - Bar Graphs: to emphasize _____ amounts.
 - Circle Graphs: to help in understanding _____ or parts of a _____ . Circle graphs are also called _____ charts.
 - Line Graphs: to indicate _____ or _____ over a period of time.
 - Histograms: to indicate data in _____ (a _____ or interval of numbers).
- A common characteristic of all graphs is that they are intended to _____ information about numerical data _____ and _____.
- All graphs should:
 - Be clearly _____.
 - Be easy to _____.
 - Have appropriate _____.
- Keep these terms in mind when working with histograms:
 - Class: an _____ (or range) of numbers that contains data items.
 - Lower class limit: the _____ whole number that belongs to a class.
 - Upper class limit: the _____ whole number that belongs to a class.
 - Class boundaries: numbers that are halfway between the _____ limit of one class and the _____ limit of the next class.
 - Class width: the _____ between the class boundaries of a class (the width of each bar).
 - Frequency: the _____ of data items in a class.