

Fifth Grade Mathematics Second Nine Weeks

Dear Parents:

These objectives listed below will be covered in the 2nd Nine Weeks Unit of study.

Addition & Subtraction of Decimals and Fractions

- Add and subtract decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.
- Add and subtract fractions with unlike denominators (including mixed numbers). For example, $\frac{2}{3} + \frac{5}{4} = \frac{8}{12} + \frac{15}{12} = \frac{23}{12}$.
- Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators.

Volume

- Recognize volume as an attribute of solid figures and understand concepts of volume measurement. Apply the formulas $V = l \times w \times h$ and $V = b \times h$ for rectangular prisms to find volumes of right rectangular prisms with whole-number edge lengths in the context solving real world and mathematical problems.
- Measure volumes by counting unit cubes, using cubic cm, cubic in, cubic ft, and improvised units.
- Relate volume to the operations of multiplication and addition and solve real world and mathematical problems involving volume

Represent and interpret data

- Make a line plot to display a data set of measurements in fractions of a unit ($\frac{1}{2}, \frac{1}{4}, \frac{1}{8}$). Use operations on fractions for this grade to solve problems involving information presented in line plots. For example, given different measurements of liquid in identical beakers, find the amount of liquid each beaker would contain if the total amount in all the beakers were redistributed equally.

Here are suggestions as to what you can do at home to help your child:

- Two types of units can be used to measure volume: solid units and containers. Solid units are like wooden cubes or solid rubber balls that can be used to fill the container being measured. Finding ways to measure containers such as a large cardboard carton in terms of a relatively small container-type unit can be an excellent challenge!
Discuss when you need to know volume in order to do household chores. Figure out how many cubic inches of stones would you need to cover the bottom of a 18 inch long and 12 inch wide fish tank with a two inch layer.
- An important part of learning about ***fractions and mixed numbers*** is the ability to identify equivalent fractions. Help your child practice using fractions by playing this game:

Collect examples of fractions from books, magazines and newspapers. You can find many examples in recipes, business listings, and craft instructions. When you find a fraction, add it to a chart with columns labeled: Close to 0; close to $\frac{1}{2}$ and close to 1; greater than 1. Ask your child to explain how he or she knew where to put each fraction in the chart.

Compare fractions. Have your child put them in order from least to greatest.

Your child is learning to add, subtract, and multiply fractions. To add or subtract fractions such as $\frac{1}{3} + \frac{1}{2}$, you have to find an equivalent for each fraction that has the same denominator. Here are two activities you can try to help your child practice these skills.

Renaming Game

- Begin by stating a fraction, such as $\frac{1}{3}$.
- Take turns naming equivalent fractions ($\frac{2}{6}$, $\frac{3}{9}$ and so on).
- When neither player can think of an equivalent fraction, start again with a new fraction.

Fraction Line-Up Materials: Deck of Playing Cards

- Take all jokers and face cards from the deck. One player deals 6 cards to each player and stacks the remaining cards face down in a pile.
- Players use 4 of their 6 cards to create any two proper fractions (numerators are less than the denominator). Once the cards are played, draw the number of cards needed to keep 6 cards in their hands.
- Players place the fractions in order from least to greatest
- Check your child's answers and ask them how they knew they are correct.
- Each player earns one point if the fractions are lined up correctly.
- First player to 5 points is the winner.

Money Discussions and the Use of a Decimal

A *decimal* is a way to express a fraction in tenths or hundredths. Point out that decimals are used in everyday experiences, such as calculating money.

Money Math

- On shopping trips, encourage your child to estimate individual prices to help keep track of the total cost of all items. For example, if the items you are buying cost \$1.22, \$7.99 and \$3.49, about how much are you spending?
- Encourage your child to check money amounts for you. For example, how much is \$3.29 and \$4.54? (\$7.83) If you give the clerk \$10 to pay for the items, how much change should you receive? (\$2.17)

Decimal Search

Suggest your child go on a decimal search to find ways decimals are used in everyday life. He or she might check advertisements, newspapers, magazines, food labels, and records of sports events.

Discuss the data together and ask your child to show you the amount of each decimal expressed as a fraction.