BEST BRAINS LEARNING CENTERS

Math - Level 5a

Welcome to Level 5a!

Congratulations, your child has successfully completed or tested beyond Level 4.

Topics Covered

Fractions

- Add, subtract, multiply and divide
- Mixed and improper

Geometry

- Angles and lines
- Area and perimeter
- Shape attributes: triangles, quadrilaterals, circles

Measurement and Data

- Coordinate graphing
- Statistical understanding
- Mean, median, mode
- Ratios and proportions

Number System

- Greatest Common Factor
- Least Common Multiple

Parent Tips for Success

- **Be the student:** Play an active role in your child's lessons. After completing the homework, ask him/her to show you what he/she learned. Repeating the information in his/her own words will increase his/her understanding of a concept.
- **Student initiative**
  - **Create games:** Encourage your child to take the initiative in his/her own learning! After completing the homework, ask him/her to come up with a game, similar to the practical activities listed below.
  - **"My On-Track" Journal:** In this level, students are introduced to several brand new concepts. Have them start a tracking journal to personally witness all the new things they have learned! It can be a pocket-sized calendar or notebook. Each day, have your child write or draw one or two new things learned. This can provide a great sense of accomplishment and an interest in personal growth.
- **Practical examples in daily life:** Some of the greatest math lessons are in the moment. Here are some suggestions for ways to integrate the math lessons with a daily activity. Remember to invite family and friends!
  - **Geometry:** Choose several types of straight-edged objects in your home (bookshelf, tiles on the floor, windows, etc.) Ask questions regarding the lines and angles of the object: Does the corner of the bookshelf make a 90˚ angle? Does it have an adjacent angle or vertex? Or vice versa: Give your child a characteristic and have him/her find an example in houses. For example, find an object that has parallel lines. Find something that shows intersecting lines, etc.

- **"My Home is Irregular":** Have your child draw a diagram of your home, including all rooms. Then include items that take up space like area rugs, appliances or furniture. Measure the perimeter of all items and note them on the diagram. Begin by calculating the area of the entire home. Then, only rooms. For an extra challenge, take into account furniture or appliances. Select a series of questions to guide your child in the activity. "What is the area of the kitchen and dining room? How much of the floor is uncovered?"

- **"Budgeting My Bills":** This is a great activity to help your child learn the importance of creating a budget for expenses, as well as learning how to create ratios and proportions. Have your child create ratio tables or double number lines for the cost of expenses in your home. For example, tell your child that you paid $2.00 for $\frac{1}{2}$ a dozen apples. Ask him or her how much it would cost for 10, 15, 20 or more apples. Enlarge this to include groceries for the week. Or, tell your child that in one month your electricity bill costs $35. How much will it cost for 4 months, 6 months, or more? This is also a great time to discuss variables. What is the difference in electricity costs for the summer and winter?

End Goals

By the end of Level 5a, students will:

- Demonstrate fluency in adding, subtracting, multiplying and dividing fractions by applying a variety of methods.
- Use the meaning of fractions to understand the relationship of multiplication and division.
- Create models to understand why the procedures for calculating fractions makes sense.
- Simplify fractions to lowest terms and determine GCF and LCM.
- List factors and multiples.
- Solve problems using ratios and proportions and organize information into tables.
- Select the correct formula to calculate area of different shapes.
- Calculate area and perimeter of irregular shapes.
- Identify shape attributes of triangles, quadrilaterals and circles.
- Classify angles as acute, obtuse, right and straight.
- Classify lines as straight, perpendicular, parallel, intersecting, line segments, lines and rays.
- Plot and translate points on a coordinate graphing system.
- Develop statistical understanding by comparing various situations.
- Analyze data by calculating spread and center.
- Select efficient and accurate methods to solve problems.
- Demonstrate reasoning through critical thinking, such as word problems, puzzles and logic-oriented activities.