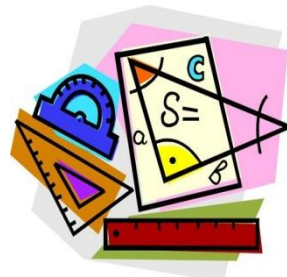


## Helping our children with math!

Under *Common Core State Standards*, our students are expected to know much more than just the right answer. **What does it mean to be mathematically proficient?** Being mathematically proficient means to know **when**, why, and **how** to apply calculations to different mathematical situations.

### Common Core Mathematical Practice Standard 5:

Use appropriate tools strategically.



#### What It Means:

'Tools' is a general term that refers to any type of **support** that students may use to perform a mathematical task. Tools may include measuring instruments such as rulers, yardsticks, protractors, balance scales, and linking cubes. Tools can **also** refer to computational aids such as paper and pencil, number lines, calculators or mental math. **Often, more than one tool can be used to help solve a problem.** However, it is very important students recognize the advantages and limitations of the available tools and select ones that are efficient and best meet the needs of a given task or problem. Although picking the most proficient tool is important, students must also understand how use it accurately. Otherwise the tool will not be beneficial to the student. For example, a calculator can only be helpful if you know how to use it!

#### **Example:**

Students are asked to solve the problem  $3.15 \times 76.32$ . The students choose to use a calculator to help solve the problem since the calculation can be tedious.

Student A: Let's see,  $3 \times 75$  is about 225 so my actual answer should be a little more than 225. Using the calculator, I got 240.408 for my solution. Since this is a little more than 225, I believe my answer makes sense and is reasonable.

Student B: 24.0408 isn't even close. I estimated my answer to be about 225. Wait, what just happened? I need to recheck my solution.

Tools that are chosen, must be used effectively, otherwise they are not helpful in solving problems.

## How to Help Your Child Become Successful with This Standard

It is important for students to be exposed to a variety of tools. They also need to be explicitly taught how to accurately use the different tools. **Discuss the advantages and limitations of specific tools. This will help students strategically pick the most appropriate tool for a given situation or problem and be able to readily justify their choices.**

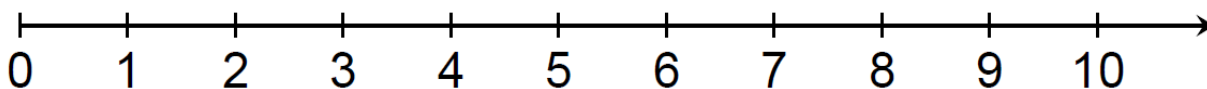
**Example:** Ask your child to pick a tool to use to measure the length of their bedroom. Then ask him/her to explain why he/she chose this tool. Are there other tools he/she could have used? Encourage your child to justify his/her choice with support and details.

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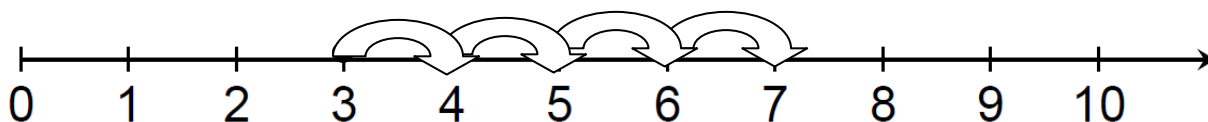
Number lines are useful tools for counting, computation and estimation. They provide a visual representation that allows students to see numbers in a sequence. They can be used to help students determine the value of numbers, make number comparisons and perform computation.

- Primary Grade Usage- Use number lines to help your child determine the next number when counting, to compare two numbers, or to help with adding and subtracting.

Examples: **What number comes after 9?**    **Which number is greater, 5 or 9?**

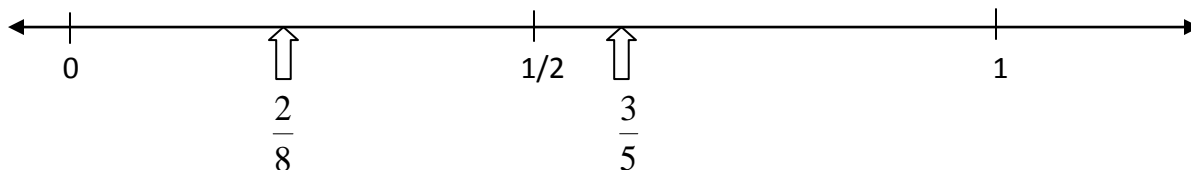


$$3 + 4 = ?$$



- Intermediate Grade Usage- With the help of a fraction number line, students can compare two fractions without having to find a common denominator by considering how close the given fractions are to the benchmarks 0,  $\frac{1}{2}$ , or 1.

Example: **Which is greater,  $\frac{3}{5}$  or  $\frac{2}{8}$ ?**



Since  $\frac{3}{5}$  is greater than one-half, and  $\frac{2}{8}$  is less than one-half,  $\frac{3}{5} > \frac{2}{8}$ .