

# Grade 5 Numeracy Learning at Home

## Keep the learning going!

The following activities support learning at home and connect to the mathematics that you have been learning. Choose activities that are interesting and challenging. Have fun!

**Patterns and Relations:** Mathematics is about recognizing, describing, and working with numerical and non-numerical patterns.

**INCREASING PATTERNS:** What do you notice about the beading pattern below? How would you extend this pattern? Draw the next three terms. Describe how each new term in the pattern is constructed using words. Describe how you can calculate the number of beads for each term.



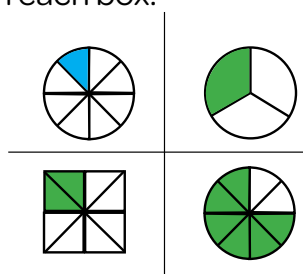
**HOW MANY BEADS WILL YOU NEED?** Predict how many beads you might need for the 10th term. What about the 20th? How can extending your table help you? How do you think you could calculate the number of beads you will need?

Term	Diamonds
1	4
2	7
3	
4	
5	

**CREATE YOUR OWN DESIGN WITH AN INCREASING PATTERN.** Can you determine how many beads you will need for the 100th term?

**Which One Doesn't Belong?** Look at what is in each box.

Choose one graph in this picture that you don't think belongs with the rest. Explain why. Can you pick another graph and give a different reason? There is at least one reason why each one does not belong.



## Math Mindset

**Math skills need practice.**

Just like a sports skill or artistic ability, focused and deliberate practice builds math skills and confidence!

**Mathematics problems are often solved using different ways or methods.**

If you get an answer quickly, can you think of another way to solve the problem? If you can't quite figure it out, can you try a different method or strategy?

## LAUGH OF THE DAY



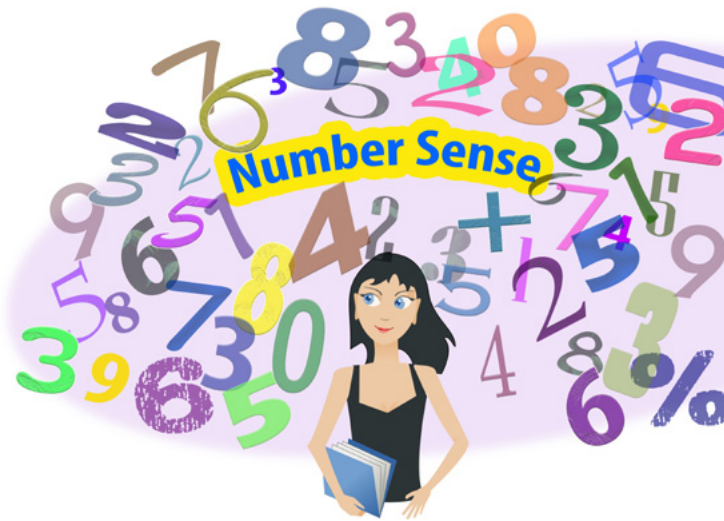
There is a fine line between a

numerator  
and a denominator.

Only a *fraction* of people may find that funny.

# Building Number Sense

Number sense is an awareness and understanding of numbers. Number sense involves knowing different ways of representing numbers, understanding the relationships among numbers, and using numbers flexibly to reason, estimate, and compute.



## Number Line

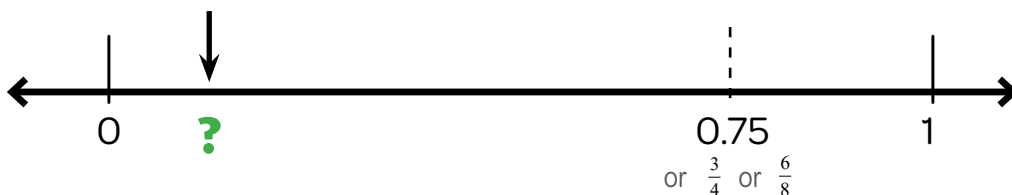
There are many different ways to use the number line in all grade levels to foster number sense. The number line helps develop greater flexibility in mental mathematics and construct meaning with number relationships. In the following activity, you will represent, compare, and order decimal numbers and fractions.



## Where Am I?

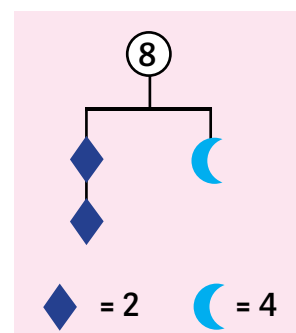
Create a number line for 0 to 1.

Where does the arrow point to on the number line? (Try representing this value as a decimal and as a fraction.) The example of 0.75 is shown. What reasons do you have for choosing that number. Try different decimals or fractions that are less than 1. How do you decide where they belong on the number line?

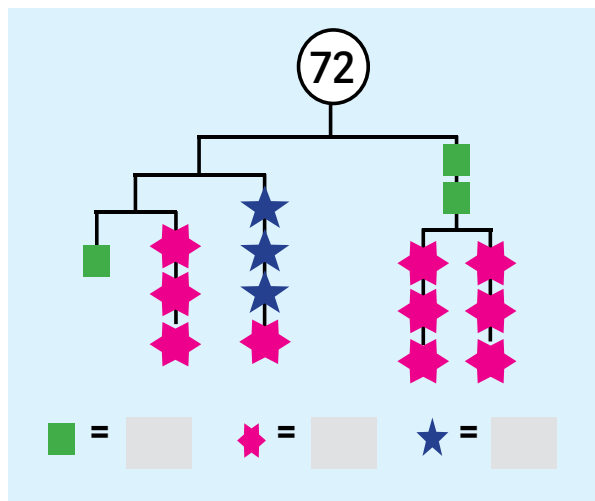


## Balanced Mobile

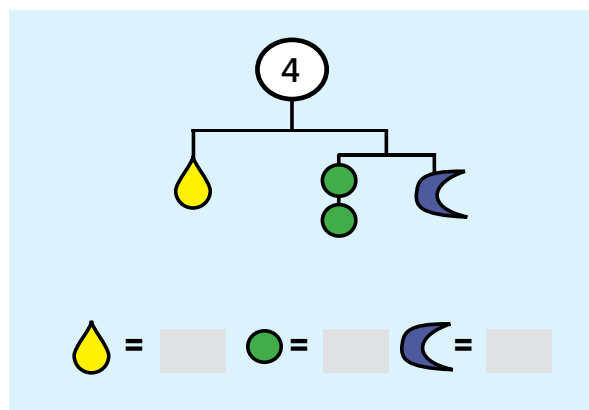
Determine the value each shape could represent on the balanced mobile. Example:



These values are whole numbers.



These values could be fractions or decimals.



## Challenge Yourself

- What if the number at the top changed?
- Try each puzzle with a different number in the circle. (Start with the example.)
- What numbers can you choose that make each puzzle easier?
- What do you notice about the numbers that make this puzzle more difficult?

## Graphing/Sorting

In this activity, you will develop an understanding of volume and capacity to estimate, measure, and compare shapes.

**How Much Is in It?** For this activity, you will need to collect a variety of empty jars and cans, one small spoon, and some water.

- What do you notice about your collection of jars and cans?
- Try arranging them from smallest to largest. How did you decide which one is bigger?
- Estimate how many spoons full of water you think could fit inside the largest of your containers. How did you make your estimate?
- Ask other people for their guesses. Ask them why they chose that number. Who was right?
- How can you get an accurate measurement?
- Filling a large container one spoonful at a time would work, but it takes patience. How could you use the other containers to help you check your estimate or measure in an easier or more efficient manner?

