

In an effort to keep parents and guardians informed of the expectations and content being covered in math class this year, this informational handout will be provided for each chapter. Its intent is to assist in guiding you in ways to support your child in deepening their mathematical understanding.

In each chapter we will spend time reviewing material taught in prior grades as it relates to the standards being taught in fourth grade. Our goal is to keep a balance of skill based learning along with enhancing our student's ability to problem solve and think conceptually.

Review Material from Prior Grades
<ol style="list-style-type: none"> 1) Products and quotients within 100. (3.OA.7) 2) Measure/estimate liquid volume and masses using standard units of grams, kilograms, and liters. Add, subtract, multiply, and divide one-step word problems involving masses/volumes in the same unit. (3.MD.2) 3) Measure lengths using a ruler to the nearest half and fourth of an inch. Show measurement data on a line plot. (3.MD.4)
New Material for 4th Grade
<ol style="list-style-type: none"> 1) I know relative sizes of measurement units within one system of units including km, m, cm, mm, kg, g, lb., oz., L, mL; hr., min, sec. I can within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. I can record measurement equivalents in a two-column table. (4.MD.1) 2) I can use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, in problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale. (4.MD.2-1) 3) I can use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, in problems involving simple fractions or decimals. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale. (4.MD.2-2) 4) I can make a line plot to display a data set of measurements in fractions of a unit $\frac{1}{2}$, $\frac{1}{4}$, and $\frac{1}{8}$. (4.MD.4-1) 5) I can solve problems involving addition and subtraction of fractions by using information presented in line plots. (4.MD.4-2)
End of Chapter Expectations
<ol style="list-style-type: none"> 1) Chapter Assessment

*Please note the list above highlights the main skills to be assessed. Teachers may include additional content to meet the needs of their students.

Customary System of Measurement

☺ Family Practice ☺

Check out some of these free math websites to practice measurement.

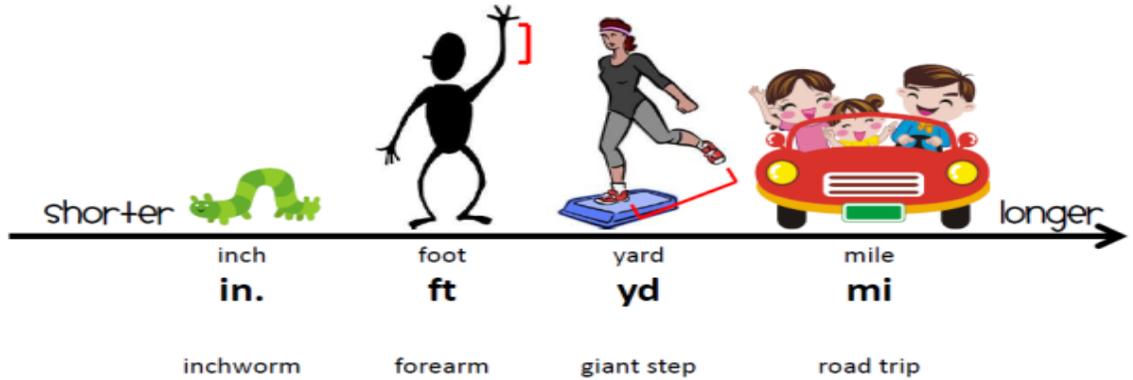
- 1) Greg Tang- Funny Numbers
<http://gregtangmath.com/funnynumbers>
- 2) Add and Subtract Customary Units
<https://www.mathgames.com/skill/4.13-add-and-subtract-customary-units>
- 3) Interpret and Create Line Plots
<https://www.mathgames.com/grade4>
- 4) Study Jams- Line Plots
<http://studyjams.scholastic.com/studyjams/jams/math/data-analysis/line-plots.htm>

In February, students will begin to take a weekly measurement quiz. These will include conversions in both the customary and metric systems, that 4th graders are required to know for the Mississippi Achievement Assessment Program (MAAP), which is our end of the year assessment. At the end of the 9 weeks, each quiz will be averaged together to make one grade for the classwork component of the students' overall math average.

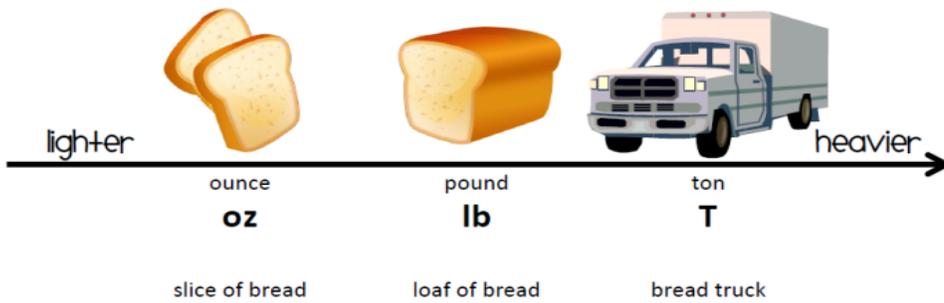
Customary Conversions			
Length		Capacity	
1 foot = 12 inches		1 cup = 8 fluid ounces	
1 yard = 3 feet		1 pint = 2 cups	
1 mile = 5,280 feet		1 quart = 2 pints	
1 mile = 1,760 yards		1 quart = 4 cups	
Weight		1 gallon = 4 quarts	
1 pound = 16 ounces		1 gallon = 16 cups	
1 ton = 2,000 pounds			

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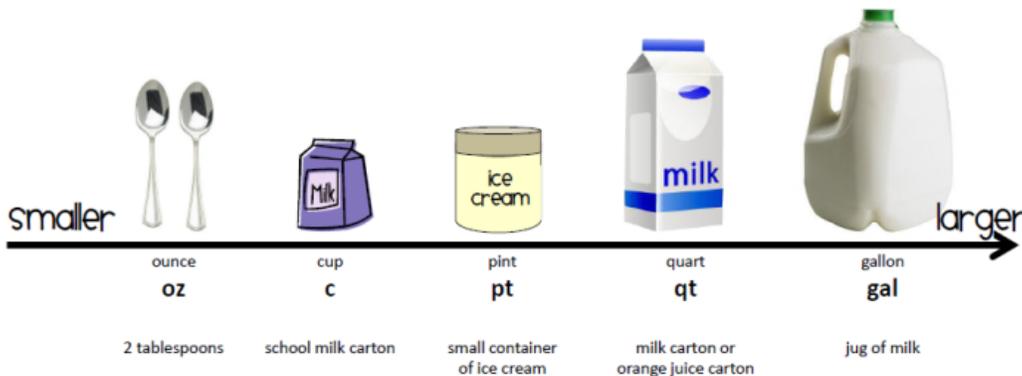
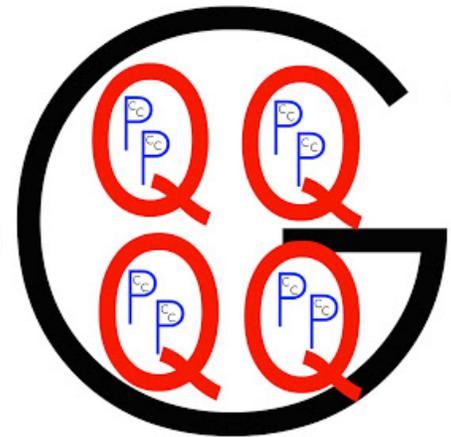
Customary Length



Customary Weight



Customary Capacity

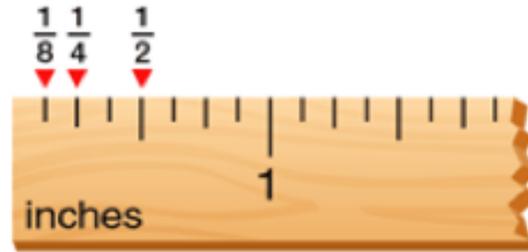


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Customary System of Measurement

Ruler Measurement

Students will use a ruler to measure the lengths of various items. Students can read a ruler with increments of halves, fourths, and eighths.



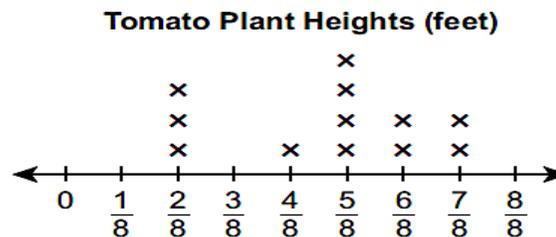
Line Plots

A line plot shows data on a number line with an 'X' or other mark to show frequency.

Student can make a line plot to display a data set of measurements in fractions of a unit ($\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$). Students can solve problems involving addition and subtraction of fractions by using information presented in line plots.

Example:

The line plot represents the heights, in feet, of tomato plants in a garden.



What is the difference, in feet, between the tallest and shortest plant heights?

- Ⓐ $\frac{1}{8}$
- Ⓑ $\frac{3}{8}$
- Ⓒ $\frac{5}{8}$
- Ⓓ $\frac{7}{8}$

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Customary System of Measurement

Units of Time

Students learned in previous grades:

- 1 week = 7 days
- 1 year = 12 months
- 1 year = 365 days
- 52 weeks = 1 year

Time
1 minute = 60 seconds
1 hour = 60 minutes
1 day = 24 hours

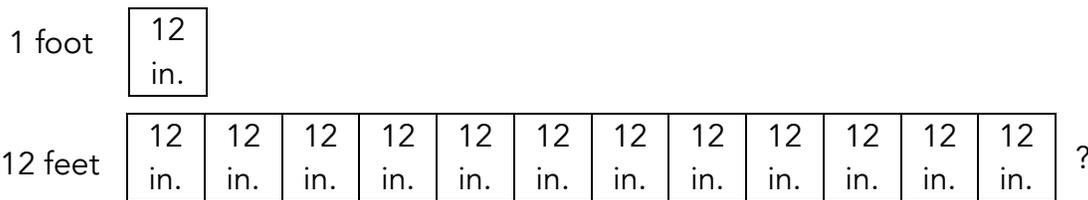
Conversion Tables

Create a conversion table to show the relationship between two units. In this example, the conversion table shows weeks and days.

weeks (wk)	days (d)	(wk, d)
1	7	(1, 7)
2	14	(2, 14)
3	21	(3, 21)
4	28	(4, 28)

Model Drawing with Measurement Conversions

The giraffe at the zoo is 12 feet tall. What is the height of the giraffe, in inches?



$$12 \times 12 = 144$$

The giraffe is 144 inches tall.

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