

Goochland County Public Schools

Grade 4 Mathematics

Marking Period 1

Numbers and Number Sense (4.1): The student will identify the place value for each digit, compare, and round a whole number expressed through millions.

Geometry (4.10, 4.11, 4.12): The student will identify and describe representations of points, lines, line segments, rays, and angles, including endpoints and vertices; identify representations of lines that illustrate intersection, parallelism, and perpendicularity; investigate congruence of plane figures after geometric transformations, such as reflection, translation, and rotation, using mirrors, paper folding, and tracing; recognize the images of figures resulting from geometric transformations, such as translation, reflection, and rotation; define polygon; identify polygons with 10 or fewer sides.

Probability and Statistics (4.14): The student will collect, organize, display, and interpret data from a variety of graphs.

Patterns, Functions, Algebra (4.15): The student will recognize, create, and extend numerical and geometric patterns.

Marking Period 2

Review all Marking Period 1 skills.

Computation and Estimation (4.4, 4.5): The student will estimate sums, differences, products, and quotients of whole numbers; add, subtract, and multiply whole numbers; divide whole numbers, finding quotients with and without remainders; solve single-step and multistep addition, subtraction, and multiplication problems with whole numbers; determine common multiples and factors, including least common multiple and greatest common factor.

Patterns, Functions, Algebra (4.16): The student will recognize and demonstrate the meaning of equality in an equation; investigate and describe the associative property for addition and multiplication.

Numbers and Number Sense (4.2): The student will compare and order fractions and mixed numbers; represent equivalent fractions; identify the division statement that represents a fraction

Marking Period 3

Review all Marking Period 1 and Marking Period 2 skills.

Numbers and Number Sense (4.3): The student will read, write, represent, and identify decimals expressed through thousandths; round decimals to the nearest whole number, tenth, and hundredth; compare and order decimals; given a model, write the decimal and fraction equivalents.

Probability and Statistics (4.13): The student will predict the likelihood of an outcome of a simple event; represent probability as a number between 0 and 1, inclusive.

Measurement (4.10): The student will determine elapsed time in hours and minutes within a 12-hour period.

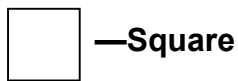
Marking Period 4

Review all Marking Period 1, Marking Period 2, and Marking Period 3 skills.

Measurement (4.6, 4.7, 4.8): The student will estimate and measure weight/mass and describe the results in U.S. Customary and metric units as appropriate; identify equivalent measurements between units within the U.S. Customary system (ounces, pounds, and tons) and between units within the metric system (grams and kilograms); estimate and measure length, and describe the result in both metric and U.S. Customary units; identify equivalent measurements between units within the U.S. Customary system (inches and feet; feet and yards; inches and yards; yards and miles) and between units within the metric system (millimeters and centimeters; centimeters and meters; and millimeters and meters); estimate and measure liquid volume and describe the results in U.S. Customary units; identify equivalent measurements between units within the U.S.

Customary system (cups, pints, quarts, and gallons).

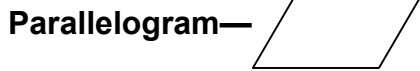
Grade 4 Mathematics



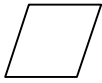
—Square



—Rectangle



Parallelogram—



—Rhombus

Measurement Conversions & Equivalent Weights

Mass/Weight:






- 1 pound (lb) = 16 ounces (oz)
- 1 Ton (T) = 2,000 pounds
- 1 kilogram (kg) = 1,000 grams (g)
- 1 ounce = about 28 grams
- 1 ounce = a slice of bread
- 1 nickel (coin) = about 5 grams
- 1 kilogram = > 2 pounds

Length:

- 12 inches (in.) = 1 foot (ft)
- 3 feet = 1 yard (yd)
- 36 inches = 1 yard
- 100 centimeters (cm) = 1 meter (m)
- 1 centimeter = 10 millimeters (mm)
- 1 meter = 1,000 millimeters
- 1 inch = about 2.5 centimeters
- 1 meter = > 1 yard
- 1 mile = > 1.5 kilometers
- 1 kilometer = > half a mile

Volume/Capacity

- 1 pint (pt) = 2 cups (c)
- 1 quart (qt) = 2 pints
- 1 gallon (gal) = 4 quarts
- 1 liter (L) = 1,000 milliliters (mL)
- 1 quart = < 1 liter
- 1 liter = > 1 quart

Fraction	Decimal
 $\frac{1}{2}$	0.5
 $\frac{1}{3}$	0.33
 $\frac{1}{4}$	0.25
 $\frac{1}{5}$	0.2
 $\frac{1}{10}$	0.1

Estimation Strategies

Front-End Estimation:

1. Use only the digits in the highest place value.
2. Change other digits to zeros.
3. Add or subtract to estimate.

Rounding Estimation:

1. Round to the highest place value.
2. Add, subtract, or multiply to estimate.

Multiplication Chart

×	0	1	2	3	4	5	6	7	8	9
0	0	0	0	0	0	0	0	0	0	0
1	0	1	2	3	4	5	6	7	8	9
2	0	2	4	6	8	10	12	14	16	18
3	0	3	6	9	12	15	18	21	24	27
4	0	4	8	12	16	20	24	28	32	36
5	0	5	10	15	20	25	30	35	40	45
6	0	6	12	18	24	30	36	42	48	54
7	0	7	14	21	28	35	42	49	56	63
8	0	8	16	24	32	40	48	56	64	72
9	0	9	18	27	36	45	54	63	72	81

Math Activities:

Multiplication War = Practice your multiplication facts with this activity. Divide the number cards (2-10) between yourself and another player. Each player turns one card up at the same time. Multiply the two cards together. The first player to say the correct product gets the cards. The winner is the player who ends up with all the cards.

Estimation Store = Whenever you are in a store, mentally estimate the total amount for the purchases you are making. See how close your estimate is when the register totals it all.

Place Value Chart

millions _____ ,
 hundred thousands _____ ,
 ten thousands _____ ,
 thousands _____ ,
 hundreds _____ ,
 ten _____ ,
 ones _____ ,
 tenths _____ ,
 hundredths _____ ,
 thousandths _____