Grade 3 Math topics

A. Numbers

a. Number lines: up to 1000
b. Write numbers in words: up to 1000
c. Ordinal numbers up to 100^{th}
d. Even or odd

B. Comparing and ordering

a. Comparing and ordering
b. Compare numbers: up to 100 000
c. Greatest and least word problems: up to 100 000
d. Order numbers: up to 1000

C. Place value: up to hundreds

a. Place value models up to hundreds
b. Value of digit: up to hundreds
c. Convert to /from a number: up to hundreds
d. Convert between standard and expanded form: up to hundreds

D. Place value: up to ten thousands

a. Place value models up to thousands
b. Value of a digit up to ten thousands
c. Convert between place values: up to ten thousands
d. Convert between standard and expanded form: up to ten thousands

E. Addition: up to three digits

a. Addition facts
b. Complete the addition sentence – up to two digits
c. Use models to add three-digit numbers – without regrouping
d. Add two numbers up to three digits
e. Add two numbers up to three digits – word problems
f. Balance addition equations – up to three digits

F. Addition: up to four digits

a. Addition patterns over increasing place values
b. Addition input/output tables – up to four digits
c. Complete the addition sentence – up to four digits
d. Add three or more numbers up to four digits each

G. Subtraction: up to three digits

a. Subtraction facts
b. Complete the subtraction equations – up to two digits

c. Subtract numbers up to three digits
d. Subtract numbers up to three digits – word problems

H. Subtraction: up to four digits

a. Subtraction patterns over increasing place values
b. Subtraction input/output tables – up to four digits
c. Subtraction up to four digits: fill in the missing digits

I. Mixed operations: addition and subtraction

a. Inequalities with addition and subtraction
b. Addition and subtraction word problems
c. Age puzzles

J. Addition properties

a. Properties of addition
b. Add using properties
c. Even or odd: addition and subtraction patterns

K. Skip-counting and number sequences

a. Skip-count by twos
b. Skip-count by tens
c. Skip-count by twos, fives, and tens
d. Count forward and backward by fives and tens
e. Skip-counting sequences with fives, tens and hundreds

L. Understand multiplication

a. Count equal groups
b. Write multiplication sentences for equal groups
c. Multiply by 0 or 1 with equal groups
d. Write multiplication sentences for arrays
e. Multiply using number lines

M. Multiplication skill builders

a. Multiply by 0
b. Multiply by 2
c. Multiply by 4
d. Multiply by 6
e. Multiply by 8

N. Factors and multiples

a. Divisibility rules for 2, 5 and 10
b. Divisibility rules for 3, 6 and 9
c. Divisibility rules for 4 and 8
d. Prime and composite numbers

O. Multiplication fluency

a. Multiplication facts for 2, 5, 10
b. Multiplication facts for 2, 5 and 10: sorting
c. Multiplication facts up to 5
d. Multiplication facts up to 5: sorting
e. Multiplication facts for 6, 7, 8 and 9
f. Multiplication facts for 6, 7, 8 and 9: sorting

P. Multiplication

a. Multiply by a multiple of ten
b. Multiplication patterns over increasing place values
c. Multiplication input/output tables: find the rule
d. Use strip models to solve multiplication word problems
e. Multiplication word problems with facts up to 5: find the missing factor
f. Compare numbers using multiplication: word problems
g. Multiply one-digit numbers by two-digit numbers using area models
h. Multiply one-digit numbers by two-digit numbers: word problems
i. Multiply one-digit numbers by three-digit numbers using area models
j. Multiply one-digit numbers by three-digit numbers: word problems
k. Multiply three or more numbers: word problems

Q. Understand division

a. Divide by counting equal groups
b. Relate multiplication and division for groups
c. Make arrays to model division
d. Relate multiplication and division

R. Division skill builders

a. Divide by 1
b. Divide by 3
c. Divide by 5
d. Divide by 7
e. Divide by 9
f. Divide by 11

S. Division fluency

a. Division facts for 2, 5 and 10
b. Division facts for 2, 5 and 10: true or false?
c. Division facts for 2, 5 and 10: sorting
d. Division facts up to 5

e. Division facts up to 5: true or false?
f. Division facts for 6, 7, 8 and 9
g. Division facts for 6, 7, 8 and 9: sorting
h. Division facts up to 10: true or false?
i. Division facts up to 10: find the missing number
j. Division sentences up to 10: true or false?

T. Division

a. Divide numbers ending in zeros
b. Division input/output tables
c. Use equal groups and arrays to solve division word problems
d. Division facts up to 10: word problems
e. Divide two-digit numbers
f. Divide two-digit numbers with remainders using arrays
g. Divide three-digit numbers using area models
h. Divide three-digit numbers: word problems

U. Mixed operations: multiplication and division

a. Multiplication and division facts up to 5: true or false?
b. Multiplication and division facts up to 10: true or false?
c. Multiplication and division facts up to 10: select the missing numbers
d. Multiplication and division sentences up to 12: true or false?
e. Multiplication and division: real-world patterns

V. Mixed operations

a. Addition, subtraction, multiplication and division facts
b. Add, subtract, multiply and divide
c. Addition, subtraction, multiplication and division word problems
d. Two-step mixed operation word problems
e. Understanding parentheses
f. Multi-step inequalities

W.Equations and variables

a. Identify equations
b. Solve for the variable: multiplication and division
c. Write variable equations to represent word problems: addition and subtraction
d. Write variable equations to represent word problems

X. Estimation and rounding

a. Estimate to the nearest 10
b. Round to the nearest 10 000
c. Rounding puzzles
d. Estimate sums up to 1000
e. Estimate sums: word problems
f. Estimate differences up to 1 000 000
g. Estimate sums and differences: word problems
h. Estimate products: word problems
i. Estimate quotients: word problems
j. Two-step word problems: identify reasonable answers

Y. Patterns

a. Repeating patterns
b. Complete a repeating pattern
c. Growing patterns
d. Find the next row in a growing pattern

Z. Money

a. Count coins and bills: up to $5 bill
b. Do you have enough money: up to $10
c. Which picture shows more?: up to $5 bill
d. Making change: up to $10
e. Inequalities with money
f. Add and subtract money amounts
g. Price lists

AA. Time

a. Match clocks and times
b. Read clocks and write times
c. Read a calendar
d. Convert between seconds, minutes and hours
e. Convert between 12-hour and 24-hour time
f. Identify times written in words
g. Elapsed time word problems
h. Reading schedules - 12-hour time

i. Timelines

BB. Coordinate graphs

a. Objects on a coordinate plane
b. Coordinate planes as maps
c. Graph points on a coordinate plane

CC. Data and graphs

a. Read a table
b. Interpret pictographs II
c. Create pictographs II
d. Create bar graphs
e. Interpret line plots
f. Interpret frequency tables
g. Interpret line graphs
h. Sort shapes into a Venn diagram

DD. Units of measurement

a. Read a thermometer
b. Measure using a centimetre ruler
c. Which metric unit of length is appropriate?
d. Convert metric units of length
e. Compare metric units of mass
f. Measure liquid volumes - metric units
g. Compare metric units of volume
h. Choose the appropriate measuring tool

EE. Lines and angles

a. Lines, line segments and rays
b. Parallel, perpendicular and intersecting lines
c. Angles greater than, less than or equal to a right angle

FF. Two-dimensional shapes

a. Identify two-dimensional shapes
b. Count and compare sides and vertices
c. Parallel sides in quadrilaterals

d. Classify quadrilaterals
e. Compose two-dimensional shapes
f. Scalene, isosceles and equilateral triangles
g. Identify congruent shapes

GG. Three-dimensional shapes

a. Identify three-dimensional shapes
b. Identify faces of three-dimensional shapes
c. Sort three-dimensional shapes
d. Three-dimensional shapes in the real world II
e. New! Three-dimensional shapes in real-world objects

HH. Perimeter, area and volume

a. Perimeter of rectangles
b. Perimeter of rectilinear shapes
c. Perimeter: find the missing side length
d. Find the area of figures made of unit squares
e. Select two figures with the same area
f. Multiply to find the area of a rectangle made of unit squares
g. Create rectangles with a given area
h. Find the missing side length of a rectangle with a given area
i. Find the area of complex figures by dividing them into rectangles
j. Volume

II. Understand fractions

a. Identify equal parts
b. Make halves, thirds and fourths
c. Make halves, thirds, fourths, sixths and eighths
d. Understand fractions: area models
e. Show fractions: area models
f. Match unit fractions to models
g. Fractions of a group
h. Decompose fractions into unit fractions

JJ.Fractions on number lines

a. Fractions of number lines: unit fractions
b. Identify unit fractions on number lines

c. Graph unit fractions on number lines
d. Graph smaller or larger fractions on number lines

KK. Fraction word problems

a. Unit fractions: modelling word problems
b. Fractions of a whole: modelling word problems
c. Fractions of a group: word problems

LL. Equivalent fractions

a. Find equivalent fractions using area models: two models
b. Identify equivalent fractions on number lines
c. Identify equivalent fractions
d. Write fractions in lowest terms

MM. Compare and order fractions

a. Compare fractions using models
b. Graph and compare fractions with like denominators on number lines
c. Graph and compare fractions on number lines
d. Compare fractions
e. Order fractions

NN. Relate fractions and decimals

a. Model decimals and fractions
b. Graph fractions as decimals on number lines
c. Convert between decimals and fractions

OO. Decimals

a. Place values in decimal numbers
b. Understanding decimals expressed in words
c. Round decimals
d. Compare decimals on number lines
e. Put decimal numbers in order

PP. Add and subtract decimals

a. Add and subtract decimals

b. Estimate sums and differences of decimals
c. Number sequences involving decimals

QQ. Probability and statistics

a. More, less and equally likely
b. Find the mode
c. Find the mean
d. Interpret charts to find mean and mode
e.