South Carolina Employability Education

Essentials of Math I

WHOLE NUMBERS, NUMBER THEORY, NUMERATION AND REAL WORLD MATH, ARITHMETIC AND CALCULATION (N) N

1 **Interpret the meanings of coefficients, factors, terms, and expressions based on their real-world contexts. Interpret complicated expressions as being composed of simpler expressions.** N.1

2 **Write a function that describes a relationship between two quantities.** N.2

- a Write a function that models a relationship between two quantities using both explicit expressions and a recursive process and by combining standard forms using addition, subtraction, multiplication and division to build new functions. N.2.A
- b Combine functions using the operations addition, subtraction, multiplication, and division to build new functions that describe the relationship between two quantitiesin mathematical and real- world situations. N.2.B

Competency Goals

1 Identify place value through 100,000 and decimals through .01. N.CG.1

2 Recognize, read, and write numbers 0- 100. N.CG.2

3 Read, write, and compare whole numbers. N.CG.3

4 Identify the place value of a digit in a number. N.CG.4

5 Compute with whole numbers to solve word problems. N.CG.5

6 Demonstrate understanding of greater than, less than, and equal concepts. N.CG.6

7 Count by multiples (Use patterns and sequences to establish concepts of patterns in math). N.CG.7

8 Identify prime and composite numbers. N.CG.8

9 Factor numbers. N.CG.9

10 Find the least common multiple for pairs of numbers. N.CG.10

11 Find the greatest common factor for pairs of numbers. N.CG.11

12 Distinguish between odd and even numbers. N.CG.12

13 Read and write whole numbers, fractions, decimals, and percents. N.CG.13

14 Develop and use order relations for whole numbers, fractions, and decimals. N.CG.14

15 Understand and apply the rules governing how the basic math operations relate to each other. N.CG.15

16 Apply mathematical skills to daily living activities in the household. N.CG.16

17 Apply mathematical skills to entertainment and leisure activities. N.CG.17

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18 Recognize symbols/signs used for basic arithmetic operations of subtraction, addition, multiplication, and division. N.CG.18

19 Demonstrate the knowledge of 4 basic arithmetic operations with whole numbers. N.CG.19

DECIMALS AND MONEY (DM) DM

1 Create and solve equations and inequalities in one variable that model real-world problems involving linear, quadratic, simple rational, and exponential relationships. Interpret the solutions and determine whether they are reasonable. DM.1

2 Solve simple rational and radical equationsin one variable and understand how extraneous solutions may arise. DM.2

Competency Goals

1 Identify names and values of coins and currency. DM.CG.1

2 Write money amounts in words and numbers. DM.CG.2

3 Round money valuesto nearest dollar and dime. DM.CG.3

4 Add and subtract money. DM.CG.4

5 Find sums and differences with money. DM.CG.5

6 Write numbers in word form and in standard notation. DM.CG.6

7 Order numbers. DM.CG.7

8 Round decimals. DM.CG.8

9 Compute with decimals and whole numbers. DM.CG.9

10 Express fractions as decimals. DM.CG.10

11 Express numbers in scientific notation. DM.CG.11

PERCENTAGES (P) P

1 Write arithmetic and geometric sequences both recursively and with an explicit formula, use them to model situations and translate between two forms. P.1

Competency Goals

1 Rename a percent as a decimal and a fraction in simplest form. P.CG.1

2 Rename a decimal and a fraction as a percent. P.CG.2

3 Find the missing terms in a percent sentence. P.CG.3

4 Use a proportion to find the missing term in a percent sentence. P.CG.4

5 Solve work problems involving percentages and tax, commissions, interest, and tips. P.CG.5

6 Calculate monthly payments on an installment plan. P.CG.6

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Use units of measurement to guide the solution of multi-step tasks. Choose and interpret appropriate labels, units, and scales when constructing graphs and other

TRADITIONAL MEASUREMENT (M) M

data displays. M.1

2 **Label and define appropriate quantitiesin descriptive modeling contexts.** M.2

3 **Choose a level of accuracy appropriate to limitations on measurement when reporting quantities in context.** M.

Competency Goals

1 Identify vocabulary associated w/time (i.e., noon, midnight, daylight savings time, am, and pm). M.CG.1

2 Tell and record time using digital and analog clocks. M.CG.2

3 Recognize and read times given using analog and digital clocks. M.CG.3

4 Write time using numerical notations. M.CG.4

5 Identify units of time (hr. = 60 min.; 24 hrs.=1 day; 12 months=1 yr.; 7 days=1 wk.; 52 wks.=1 yr.). M.CG.5

6 Locate day, date, and month on calendar. M.CG.6

7 Identify abbreviations for units of time (i.e., day, week, month, hour, minute, and year). M.CG.7

8 Relate daily, weekly, and monthly events to clock and calendar. M.CG.8

9 Select and use appropriate units of measurement (e.g., linear and temperature). M.CG.9

10 Select and use appropriate toolsfor measurement. M.CG.10

11 Solve 1- and 2-step math applications involving 4 basic arithmetic processes (measurements, money, time, and temperature), using problem-solving techniques. M.CG.11

12 Measure line segments to the nearest tenth of a centimeter (nearest millimeter). M.CG.12

13 Estimate accurately the best unit for measuring a distance. M.CG.13

14 Change from one metric unit to another. M.CG.14

15 Find area measured in square units M.CG.15

16 Find volume measured in cubic units. M.CG.16

17 Find volume, or capacity, measured in liters. M.CG.17

18 Convert units of liquid capacity. M.CG.18

19 Convert units of weight. M.CG.19

20 Use a ruler to help measure line segments. M.CG.20

21 Convert units of length and distance. M.CG.21

22 Find the perimeter of a given shape. M.CG.22

23 Calculate the area within a shape. M.CG.23

24 Compute the volume within a prism. M.CG.24

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FRACTIONS (F) F

1 **Rewrite expressions involving simple radicals and rational exponents in different forms.** F.1

2 **Solve simple rational and radical equationsin one variable and understand how extraneous solutions may arise.** F.2

Competency Goals

1 Recognize fractional parts and equivalent fractions. F.CG.1

2 Compare and order fractions. F.CG.2

3 Add and subtract fractions with like denominators. F.CG.3

4 Multiply and divide fractions. F.CG.4

5 Simplify fractions. F.CG.5

6 Compare fractions, and determine which ismore than or less than. F.CG.6

7 Rename mixed numbers and improper fractions. F.CG.7

8 Compute with fractions and mixed numbers. F.CG.8