South Carolina Special Education

High School Credential Math III

One Step Mathematical Operations: Quantity, Money, Time, Measurement, Fractions, Decimals, Negative Numbers (OS)

1. **Add, subtract, and multiply polynomials and understand that polynomials are closed under these operations. (Limit to linear; quadratic)** 3.OS.1

2. **Understand and justify that the steps taken when solving simple equations in one variable create new equations that have the same solution as the original.** 3.OS.2
   - A. Add, subtract, multiply, and divide using whole numbers 3.OS.A
   - B. Add and subtract using positive and negative numbers. 3.OS.B
   - C. Change a quantity from one form to another using whole numbers, fractions, decimals, and percentages. 3.OS.C
   - D. Solve simple one-step word problems in a systematic manner. 3.OS.D
   - E. Demonstrate a mastery of measurement using a ruler and tape measure. 3.OS.E

Multiple step problems (re-order information): Money, time, fractions, decimals, percentages, measurement, averages, proportions, graphs, and diagrams (MS)

1. **Relate the domain and range of a function to its graph and, where applicable, to the quantitative relationship it describes. (Limit to linear; quadratic; exponential)** 3.MS.1

2. **Analyze decisions and strategies using probability concepts.** 3.MS.2
   - A. Reorder information and eliminate information to solve problems 3.MS.A
   - B. Calculate one-step conversions. 3.MS.B
   - C. One or two mathematical operations; addition, subtraction, multiplication, or division on positive or negative numbers. 3.MS.C
   - D. Calculate averages, simple rations, proportions, and rates using whole numbers and decimals. 3.MS.D
   - E. Add simple fractions, decimals, or percentages. 3.MS.E
   - F. Read and draw simple graphs and diagrams. 3.MS.F

Multiple Step Problems (extraneous information): Fractions, decimals, percentages, measurement, perimeter, area,

1. **Solve literal equations and formulas for a specified variable including equations and formulas that arise in a variety of disciplines.** 3.EI.1

2. **Write arithmetic and geometric sequences both recursively and with an explicit formula, use them to model situations, and translate between the two forms.** 3.EI.2

production rates, best deals (EI)

3. **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 data displays.** 3.EI.3
   - A. Separate the important facts from the information. 3.EI.A
   - B. Look up formulas and use them to perform one step conversions. 3.EI.B
   - C. Calculate using mixed units. 3.EI.C
   - D. Calculate perimeter and areas. 3.EI.D
   - E. Calculate percentage discounts and markups. 3.EI.E
   - F. Calculate a balance sheet or order form 3.EI.F
   - G. Calculate the best deal using one or two step calculations to compare costs. 3.EI.G

Problem solving: multiple steps, fractions, decimals, percentages, area & volume, rate problems, best deals (PS)

1. **Solve linear equations and inequalities in one variable, including equations with coefficients represented by letters.** 3.PS.1
2. **Solve literal equations and formulas for a specified variable including equations and formulas that arise in a variety of disciplines.** 3.PS.2
3. **Understand and justify that the steps taken when solving simple equations in one variable create new equations that have the same solution as the original.** 3.PS.3
   - A. Solve complicated multiple step problems. 3.PS.A
   - B. Calculate using negative numbers, fractions, ratios, percentages, and mixed numbers. 3.PS.B
   - C. Calculate multiple rates. 3.PS.C
   - D. Compare ratios or use them to perform other calculations 3.PS.D
   - E. Find areas and volumes of rectangles. 3.PS.E
   - F. Calculate the best deal using the result in another problem. 3.PS.F
   - G. Find mistakes in calculations. 3.PS.G

Reasoning skills (careful reading): multiple steps, volume and area, ratios and proportions, best deals, troubleshooting, unknowns. (RS)

1. **Explain the derivations of the formulas for the circumference of a circle, area of a circle, and volume of a cylinder, pyramid, and cone. Apply these formulas to solve mathematical and real-world problems.** 3.RS.1

2. **Apply surface area and volume formulas for prisms, cylinders, pyramids, cones, and spheres to solve problems and justify results. Include problems that involve algebraic expressions, composite figures, geometric probability, and real-world applications.** 3.RS.2

   A. Do several steps of reasoning and multiple calculations. 3.RS.A

   B. Solve problems involving more than one unknown. 3.RS.B

   C. Calculate the percentage of change. 3.RS.C

   D. Calculate multiple areas and volumes of sphere 3.RS.D

   E. Set up and manipulate complex ratios and proportions. 3.RS.E

   F. Determine the best economic value of several alternatives. 3.RS.F

   G. Find mistakes in multiple step calculations. 3.RS.G