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SAMPLE PROBLEMS ILLUSTRATIVE OF ITEMS BASED ON MODIFIED ACADEMIC ACHIEVEMENT STANDARDS

The Kansas Assessment of Modified Measures (KAMM) is an alternate assessment based on modified academic achievement standards. The KAMM is aligned with grade level academic content standards reflecting the same standards as those on the general assessment. The KAMM is designed to be challenging for eligible students, but have an overall reduced level of difficulty. This is achieved on the math KAMM through one or more of the following:

- **Limits on complexity of specific test items (e.g. limiting decimals to the hundredths place on the KAMM rather than thousandths place on general)**
- **Use of simplified language that reduces reading load**
- **Use of three response choices (i.e. two distracters) rather than four choices (i.e. three distracter) as on the general assessments**
- **Reduction of overall length of assessment**
- **Modify item specifications (e.g. provide graphic when appropriate; focus on the mathematical relationships, <u>not</u> solving for a missing part**

Six sample items from grades 7 and 8, included in this document, were pulled from those developed for Kansas' general assessment (**G**) and six from items developed for KAMM (**M**). Each type of item is based on the same Kansas Curricular Standards for Mathematics and is at the same cognitive level. Each test item (**G and M**) is listed below the Standard/Benchmark/Indicator and the item specification used for development. (Note: The items have been withdrawn from the assessment pool and are not active items.)

GRADE 7

Standard/Benchmark/Indicator

M.7.1.1.A1a (Indicator coding - M=Math .7=Grade .1=Standard .1=Benchmark .A1a=Indicator)
Standard: 1 Number and Computation
Benchmark:1 Number Sense
Indicator: A1a. Generates and/or solves real-world problems using: a) equivalent representations of rational numbers and simple algebraic expressions.

General Education Item Specification

- **Category 5: Solve Non-routine Problems/Make Connections: 5b.** Apply mathematics in contexts outside of mathematics (whenever possible, include diagrams/visuals)

KAMM Item Specification

- For KAMM, provide graphic when appropriate.
- **Category 5: Solve Non-routine Problems/Make Connections: 5b.** Apply mathematics in contexts outside of mathematics (whenever possible, include diagrams/visuals)

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Question Representative of Those on Kansas' General Assessment
Kansas Curricular Standards for Mathematics Indicator: 7.1.1.A1a
Math Skill Category: 5b
(Item # 33035)

1**G**. There are many types of animals living in a jungle.

- 3/20 of the animal types are birds.
- 7.5% of the animal types are mammals.

What percent of the animal types living in the jungle are **not** birds or mammals?

A. 15.0%

B. 22.5%

C. 77.5%

D. 92.35%

Correct Answer: C

Question Representative of Those Based on Modified Academic Achievement Standards
Kansas Curricular Standards for Mathematics Indicator: 7.1.1.A1a
Math Skill Category: 5b
(Item # 55478)

1**M**. Kenny spends ¼ of his allowance at an arcade, 15% of his allowance at a candy shop, and 40% of his allowance at a music store. What percent of Kenny's allowance has he spent?

A 80%

B 69%

C 591%

Correct Answer: A

Standard/Benchmark/Indicator

M.7.2.1.K1a
Standard: 2 Algebra
Benchmark: 1 Patterns
Indicator: K1a Identifies, states, and continues a pattern presented in various formats including numeric (list or table), algebraic (symbolic notation), visual (pictures, table, or graph), verbal (oral description), kinesthetic (action), and written using these attributes:

a) counting numbers including perfect squares, cubes, and factors and multiples (number theory)

General Education Item Specification

- **Category 4: Conjecture/Generalize/Prove: 4c.** Recognize, generate, or continue patterns

KAMM Item Specification

- *Test Specification Note:*
  Assess patterns presented in all formats EXCEPT the kinesthetic format.
- **Category 4: Conjecture/Generalize/Prove: 4c.** Recognize, generate, or continue patterns

Question Representative of Those on Kansas' General Assessment
Kansas Curricular Standards for Mathematics Indicator: 7.2.1.K1a
Math Skill Category: 4c
(Item # 20814)

2**G**. The table below shows the relationship between the number of cans a student recycles and the number of free drinks the student receives for the cans.

Free Drinks for Cans

Cans	12	18	24	30	?
Free Drinks	1	2	3	4	5

What is the missing number in the table?

A 36

B 40

C 42

D 60

Correct Answer: A

Question Representative of Those Based on Modified Academic Achievement Standards
Kansas Curricular Standards for Mathematics Indicator: 7.2.1.K1a
Math Skill Category: 4c
(Item # 22374)

2**M**. A pattern of numbers is shown below.

1 4 9 16 25

The pattern continues.
What is the next number in the pattern?

A 28

B 34

C 36

Correct Answer: C

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Standard/Benchmark/Indicator

M.7.2.2.K7
Standard: 2 Algebra
Benchmark: 2 Variable, Equations, and Inequalities
Indicator: K7 Knows the mathematical relationship between ratios, proportions, and percents and how to solve for a missing term in a proportion with positive rational number solutions and monomials.

General Item Specification

- **Category 2: Perform Procedures: 2d.** Solve equations, formulas, or routine word problems

KAMM Item Specification

- *Item Specification Note:*
  When writing items to this indicator (M.7.2.2.K7) for Math Skill Category **3a**, focus on the mathematical relationships, **NOT** solving for a missing part.
- **Category 2: Perform Procedures: 2d.** Solve equations, formulas, or routine word problems

Question Representative of Those on Kansas' General Assessment
Kansas Curricular Standards for Mathematics Indicator: 7.2.2.K7
Math Skill Category: 2d
(Item # 54135)

3**G**. A proportion is shown below.

$$\frac{14}{16} = \frac{56}{k}$$

What is the value of *k* in the proportion?

A 22

B 49

C 58

D 64

Correct Answer: D

Question Representative of Those Based on Modified Academic Achievement Standards
Kansas Curricular Standards for Mathematics Indicator: 7.2.2.K7
Math Skill Category: 2d
(Item 55309)

3**M**. A proportion is shown below.

$$\frac{n}{10} = \frac{6}{5}$$

What is the value of *n* in the proportion?

A 3

B 11

C 12

Correct Answer: C

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GRADE 8

Standard / Benchmark / Indicator

M.8.3.1.A1a
Standard: 3 Geometry
Benchmark: 1 Geometric Figures and Their Properties
Indicator: A1a Solves real-world problems by: a) using the properties of corresponding parts of similar and congruent figures

General Ed Item Specification

- **Category 2: Perform Procedures: 2d.** Solve equations, formulas, or routine word problems

KAMM Item Specification

- For KAMM, provide graphic when appropriate
- Solve real-world problems using knowledge that congruent figures are the same exact shape and size and their corresponding sides are the same length and their areas are the same.

- **Category 2: Perform Procedures: 2d.** Solve equations, formulas, or routine word problems

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Question Representative of Those on Kansas' General Assessment
Kansas Curricular Standards for Mathematics Indicator: 8.3.1.A1a
Math Skill Category: 2d
(Item # 54307)

4**G**. Jessie created a scale drawing of her house. The height of Jessie's house in the scale drawing is 3 inches. The height of Jessie's actual house is 15 feet. The width of her actual house is 90 feet. What is the width of the house in the scale drawing?

A 2 inches

B 6 inches

C 18 inches

D 78 inches

Correct Answer: C

Question Representative of Those Based on Modified Academic Achievement Standards
Kansas Curricular Standards for Mathematics Indicator: 8.3.1.A1a
Math Skill Category: 2d
(Item 55455)

4**M**. The scale on a map is 1 inch : 20 miles. The distance between two towns on the map is 4 inches. What is the actual distance between the two towns?

A 5 miles

B 20 miles

C 80 miles

Correct Answer: C

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Standard/Benchmark/Indicator

M.8.4.1.A4a
Standard: 4 Data
Benchmark: 1 Probability
Indicator: A4a Makes predictions based on the theoretical probability a) a simple event in an experiment or simulation

General Ed Item Specification

- **Category 4: Conjecture/Generalize/Prove: 4a.** Determine the truth of a mathematical pattern, a mathematical statement, and/or proposition or make predictions

KAMM Item Specification

- **Category 4: Conjecture/Generalize/Prove: 4a.** Determine the truth of a mathematical pattern, a mathematical statement, and/or proposition or make predictions

Question Representative of Those on Kansas' General Assessment
Kansas Curricular Standards for Mathematics Indicator: 8.4.1.A4a
Math Skill Category: 4a
(Item # 30448)

5**G**. A fishbowl contains 200 raffle tickets. Exactly 80 of the raffle tickets are yellow. Sheryl randomly selected 40 raffle tickets from the fishbowl. Which number of yellow raffle tickets did Sheryl **most** likely select?

A 8 yellow raffle tickets

B 16 yellow raffle tickets

C 20 yellow raffle tickets

D 24 yellow raffle tickets

Correct Answer: B

Question Representative of Those on Kansas' General Assessment
Kansas Curricular Standards for Mathematics Indicator: 8.4.1.A4a
Math Skill Category: 4a
(Item # 55967)

5**M**. Bill has a pile of 40 cards. The cards are numbered 1 through 40. Bill randomly selects one card from the pile. Which statement about the card Bill selects is true?

A The card most likely has a number 30 or less.

B The card most likely has a number between 30 and 40.

C The card most likely has a number 30 or greater.

Correct Answer: A

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Standard/Benchmark/Indicator

M.8.4.2.K3
Standard: 4 Data
Benchmark: 2 Statistics
Indicator: K3 Determines and explains the measure of central tendency (mode, median, mean) for a rational number data set.

General Ed Item Specification

- **Category 2: Perform Procedures: 2b.** Do computational procedures or algorithms

KAMM Item Specification

- For KAMM, provide data set in increasing order.
- **Category 2: Perform Procedures: 2b.** Do computational procedures or algorithms

Question Representative of Those on Kansas' General Assessment
Kansas Curricular Standards for Mathematics Indicator: 8.4.2.K3
Math Skill Category: 2b
(Item # 54261)

6**G**. The number of yards of fabric sold at a store during each of six weeks is listed below.

111 87.5 98 124 107 72.5

What is the **median** number of yards of fabric sold at the store during the six weeks?

A 51.5 Yards

B 100 Yards

C 102.5 Yards

D 111 Yards

Correct Answer: C

Question Representative of Those on Kansas' General Assessment
Kansas Curricular Standards for Mathematics Indicator: 8.4.2.K3
Math Skill Category: 2b
(Item # 55458)

6**M**. The list below shows the shoe sizes of seven boys in John's class.

8 8 8 9 11 12 14

What is the **mode** of the shoe sizes?

A 8

B 9

C 10

Correct Answer: A