The University of Texas at Austin UT High School

Kindergarten Math Study Guide<br>Credit by Exam for Credit Recovery or Acceleration

The exam you are interested in taking is designed to test your proficiency in the relevant subject matter. You should be thoroughly familiar with the subject matter before you attempt to take the exam. This EA/CBE Study Guide can help you prepare for the exam by giving you an idea of what you need to review. You can check your familiarity level by reviewing the Texas Essential Knowledge and Skills (TEKS) for this course (see below). To refine your skills, you can refer to any of the state-adopted textbooks.

## Texas Essential Knowledge and Skills (TEKS)

Every question that appears on this exam is derived from the knowledge and skills statements and student expectations within the Texas-mandated standards, the Texas Essential Knowledge and Skills (TEKS). You can view the TEKS for this exam online via the following link: http://ritter.tea.state.tx.us/rules/tac/chapter111/ch111a.html-111.2. Refer to section (b), Knowledge and skills, 1A-9D.

Throughout this guide, you'll see TEKS references. These refer to the numbers listed under (b) Knowledge and skills; for example, 1A or 3B.

## Materials Needed

## Paper exams

The exams will include an exam booklet and a separate computer graded answer sheet. Student responses must be recorded on the computer graded answer sheet.

The Kindergarten exam is administered orally to the students. Students will then indicate their answers to the questions by:

- responding orally to test items,
- pointing towards the selected answer, or
- bubbling in the correct answer themselves.

The test proctor must transcribe student responses onto the computer graded answer sheet. Directions for transcribing answers onto the computer graded answer sheet are located in the Test Proctor Manual. Exam responses cannot be scored unless they appear on the computer graded answer sheet.

## Online Exams

Student responses must be recorded in the online exam.
The Kindergarten exam is administered orally to the students. Students will then indicate their answers to the questions by:

- responding orally to test items,
- pointing towards the selected answer, or
- bubbling in the correct answer themselves.


## Exam Structure

You will be allowed $\mathbf{3}$ hours to complete this exam. The exam consists of 40 multiple-choice questions that are equally weighted. You will be allowed two short, monitored breaks during the exam. The exam covers the following 6 Objectives:

Objective 1: Number and Operations (15 questions)
Objective 2: Algebraic Reasoning (5 questions)
Objective 3: Geometry and Measurement (10 questions)
Objective 4: Data Analysis (5 questions)
Objective 5: Personal Financial Literacy (5 questions)

## Scholastic Honesty

When you arrive at the testing center, you will be asked to carefully read the exam rules and sign a statement agreeing to take the exam in accordance with the rules. This is called the Examinee's Certification. The following is a copy of these rules:

## Examinee's Certification

This certification must be signed before the exam is administered and then returned with the completed examination attached, or credit for the exam will not be given.

Scholastic dishonesty is a serious academic violation that will not be tolerated. Scholastic dishonesty encompasses, but is not limited to:

- copying from another student's work;
- using an unauthorized testing proctor or taking the exam at an unauthorized testing location;
- using materials not authorized by a testing proctor;
- possessing materials that are not authorized by a testing proctor, such as lessons, books, or notes;
- knowingly using or soliciting, in whole or part, the contents of an unadministered test;
- collaborating with or seeking aid from another student without authorization during the test;
- substituting for another person, or permitting another person to substitute for oneself, in taking a course test or completing any course-related assignment;
- using, buying, stealing, or transporting some or all of the contents of an unadministered test, test rubric, homework answer, or computer program.

Evidence of scholastic dishonesty will result in a grade of $\boldsymbol{F}$ on the examination and an $\boldsymbol{F}$ in the course (if applicable).

At the testing center, you will be asked to sign a statement that says you have read the above and agree to complete the examination with scholastic honesty.

## General Study Tips

The bulleted lists and sample questions in this study guide can assist you in preparing for the exam. It is a fairly complete guide, but does not cover every item on the test. Ultimately, you should use the TEKS to guide your exam preparation.

## Additional Study Tips

The following information provides direction for your studies. For each part, you will find study tips and sample questions to give you a general idea of the types of questions you can expect to see on the exam.

## Objective 1: Numbers and Operations

This part relates to your knowledge of how to represent, count, and compare whole numbers, and find relationships within the numeration system. It includes 15 questions.

## Study Tips for Objective 1

This part relates to TEKS 2A-4. Familiarize yourself with those TEKS, and then be prepared to demonstrate knowledge of the following topics:

- Count forward and backward up to 20
- Read, write, represent numbers within 20
- Compare sets of objects up to 20
- Produce a number that is one more or one less than a number up to 20
- Compose and decompose numbers up to 10 using objects
- Solve problems involving addition and subtraction within 10 and explain the strategies used
- Identify U.S. coins by name


## Sample Questions for Objective 1

The following are sample questions. You can find the correct answers listed at the end of this study guide, but try answering the questions without looking at the answers first to check your comprehension.

## DIRECTIONS: Select the BEST response to each of the following questions.

1. Ms. Lincoln asked her students to draw shapes in their journals. Johnny drew 5 triangles and Hank drew 4 squares.


Which number sentence should Ms. Lincoln use to determine how many shapes the boys drew altogether?
A. $4+5=9$
B. $9-5=4$
C. $5+4=10$
D. $9-4=5$
2. Janet has the collection of pennies below.


Which collection of pennies is MORE than Janet's collection?

B.

C.


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## Objective 2: Algebraic Reasoning

This part relates to your knowledge of identifying patterns in the number word list. It includes 5 questions.

## Study Tips for Objective 2

This part relates to TEKS 5. Familiarize yourself with those TEKS, and then be prepared to demonstrate knowledge of the following topics:

- Recite numbers up to 100 , starting at any number
- Count by ones and tens up to 100 , starting at any number


## Sample Questions for Objective 2

The following are sample questions. You can find the correct answers listed at the end of this study guide, but try answering the questions without looking at the answers first to check your comprehension.

## DIRECTIONS: Select the BEST response to each of the following questions.

3. If Henry counts by ones and begins with the number 55, which number belongs in the empty space?

$$
55,56,57,58,59, \square, 61,62,63,64,65
$$

A. 50
B. 5910
C. 60
D. 66
4. Sarah is practicing counting by tens. She begins with 10 and ends with 100 . Which of the following number sequences is correct?

A. $10,20,30,40,50,60,70,80$
B. $20,30,40,50,60,70,80,90$
C. $1,2,3,4,5,6,7,8,9,10$
D. $2,3,4,5,6,7,8,9$

## Objective 3: Geometry and Measurement

This part relates to your knowledge of the attributes and properties of two-dimensional shapes and three-dimensional solids and the ability to compare their measurable attributes and properties. It includes 10 questions.

## Study Tips for Objective 3

This part relates to TEKS 6A-7B. Familiarize yourself with those TEKS, and then be prepared to demonstrate knowledge of the following topics:

- Identify two-dimensional shapes and their attributes using formal and informal geometric language
- Identify real life examples of three-dimensional solids and their attributes
- Identify two-dimensional components of three-dimensional objects
- Classify and sort two and three-dimensional figures
- Create two-dimensional shapes
- Give examples of measurable attributes of objects
- Compare two objects with a common measurable attribute


## Sample Questions for Objective 3

The following are sample questions. You can find the correct answers listed at the end of this study guide, but try answering the questions without looking at the answers first to check your comprehension.

## DIRECTIONS: Select the BEST response to each of the following questions.

5. How are the circled objects below the same?

A. All of the circled objects are examples of cones.
B. All of the circled objects are examples of cylinders.
C. All of the circled objects are examples of cubes.
D. All of the circled objects are examples of spheres.
6. Yahira is thinking of a shape. She gives the following clues:

- My shape is flat.
- My shape has 4 sides.
- My shape has 4 angles.

Based on the clues, which shape could be the one Yahira is thinking of?
A.

B.

C.

D.

7. Which real life object weighs the LEAST?
A.

B.

C.

D.

8. Horatio and Sam line up their pencils to compare them.


What do the boys notice about their pencils?
A. Horatio's pencil is longer than Sam's pencil.
B. Sam's pencil is longer than Horatio's pencil.
C. Sam's pencil is shorter than Horatio's pencil.
D. Horatio and Sam's pencils are the same length.

## Objective 4: Data Analysis

This part relates to your knowledge of collecting, organizing, and interpreting data. It includes 5 questions.

## Study Tips for Objective 4

This part relates to TEKS 8A-8C. Familiarize yourself with those TEKS, and then be prepared to demonstrate knowledge of the following topics:

- Collect, sort, and organize data into two or three categories
- Create real-object and picture graphs to represent data
- Interpret information from real-object and picture graphs


## Sample Questions for Objective 4

The following are sample questions. You can find the correct answers listed at the end of this study guide, but try answering the questions without looking at the answers first to check your comprehension.

## DIRECTIONS: Select the BEST response to each of the following questions.

9. Mr. Reynolds created a graph to represent his students' favorite fruits.

Students' Favorite Fruits


According to the graph, how many students chose bananas as their favorite fruit?
A. 5
B. 6
C. 7
D. 18
10. Amira opened a small bag of fruit candies. She used the candies to create the graph below to show the amount of each fruit flavor in the bag.

Fruit Candies

| Strawberry | Orange | Lime |
| :--- | :--- | :---: |
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According to the graph, which statement is true?
A. There are less orange candies than lime candies.
B. There are less lime candies than strawberry candies.
C. There are more orange candies than any other flavor.
D. There are less orange candies than strawberry candies.

## Objective 5: Personal Financial Literacy

This part relates to your knowledge of managing financial resources. It includes 5 questions.

## Study Tips for Objective 5

This part relates to TEKS 9A-9D. Familiarize yourself with those TEKS, and then be prepared to demonstrate knowledge of the following topics:

- Identify ways to earn income
- Understand the difference between earning money as a gift and money received as income
- Know simple skills required for jobs
- Distinguish between wants and needs
- Identify income as a way to meet wants and needs


## Sample Questions for Objective 5

The following are sample questions. You can find the correct answers listed at the end of this study guide, but try answering the questions without looking at the answers first to check your comprehension.

## DIRECTIONS: Select the BEST response to each of the following questions.

11. Starla made a chart displaying her wants and needs.

| Wants | Needs |
| :---: | :---: |
| Toys | Food |
| Scooter | Clothing |
| Books | Shelter |

Which of the following options fits under the Needs column?
A. Socks
B. Water
C. Pencils
D. Video games
12. Francis wants to be a doctor when he grows up. Which of the following skills will he NOT need to become a doctor?
A. Math skills
B. Writing skills
C. Painting skills
D. Reading skills

## Answer Key

| Item Number | Correct Answer | TEKS <br> expectation |
| :---: | :---: | :---: |
| 1 | A | $2 \mathrm{I}, 3 \mathrm{~A}, 3 \mathrm{~B}$ |
| 2 | D | $2 \mathrm{~A}, 2 \mathrm{C}, 2 \mathrm{G}$ |
| 3 | C | 5 A |
| 4 | B | 5 A |
| 5 | B | $6 \mathrm{~B}, 6 \mathrm{E}$ |
| 6 | D | $6 \mathrm{~A}, 6 \mathrm{D}$ |
| 7 | D | 7 A |
| 8 | A | 7 B |
| 9 | C | $8 \mathrm{~A}, 8 \mathrm{C}$ |
| 10 | A | $8 \mathrm{~A}, 8 \mathrm{~B}, 8 \mathrm{C}$ |
| 11 | B | 9 D |
| 12 | C | 9 C |

