



2nd Grade Math Study Guide Credit by Exam for Acceleration or Credit Recovery

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#111.4>. Refer to section (b),

Knowledge and skills, 1A–11F.

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

You will need to bring a #2 pencil to complete the exam. You will receive a computer-graded answer sheet when you arrive at the testing center.

Online Exams

If necessary, materials will be provided by the testing center.

Exam Structure

You will be allowed **3 hours** to complete this exam. The exam consists of 44 multiple-choice questions that are equally weighted. You will be allowed two short, monitored breaks during the exam. The exam covers the following 5 Objectives:

Objective 1: Number and Operations (22 questions)

Objective 2: Algebraic Reasoning (5 questions)

Objective 3: Geometry and Measurement (9 questions)

Objective 4: Data Analysis (4 questions)

Objective 5: Personal Financial Literacy (4 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 *F* on the examination and an *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 place value, comparing numbers, word problems involving addition and subtraction, and identifying coins and their values. It includes 22 questions.

Study Tips for Objective 1

This part relates to TEKS 2A–6B. Familiarize yourself with those TEKS, and then be prepared to demonstrate knowledge of the following topics:

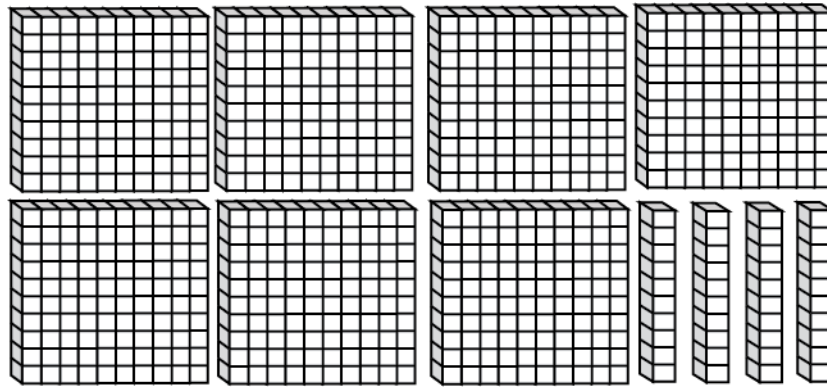
- Use models to compose and decompose numbers up to 1,200
- Represent numbers up to 1,200 in standard, word, and expanded forms
- Generate a number greater than or less than a given number up to 1,200
- Compare and order numbers up to 1,200
- Find the position of a given number on an open number line
- Name the number that corresponds to a specific point on a number line
- Divide objects into equal parts and be able to name/identify the corresponding fraction (halves, fourths, and eighths)
- Explain that fractions with larger denominators will have smaller fractional parts and fractions with smaller denominators will have larger fractional parts
- Use concrete models to name fractions greater than one
- Recall basic addition and subtraction facts within 20
- Add up to four two-digit numbers and subtract two-digit numbers
- Solve one-step and multi-step word problems using addition and subtraction within 1,000
- Find the value of a collection of coins up to one dollar
- Model multiplication using equal sets of objects
- Model division using objects separated into equal sets

Sample Questions for Objective 1

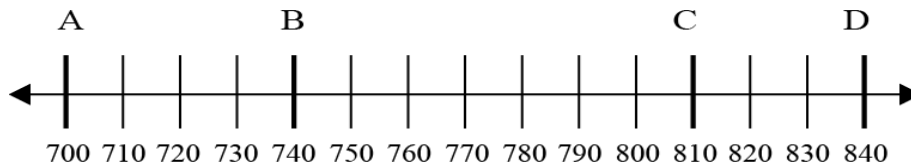
The following are sample questions. You can find the correct answers listed at the end of this study guide, but try answering the questions without looking at the answers first to check your comprehension.

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

- Harold composed the number below using base ten blocks below to represent how many people visited the zoo on Friday.



70 more people visited the zoo on Saturday than on Friday. Which point on the number line represents how many people visited the zoo on Saturday?



- A. Point A
- B. Point B
- C. Point C
- D. Point D

2. Look at the model below.



What fraction does the model represent?

- A. One-eighth
 - B. Seven-eighths
 - C. One and one-fourth
 - D. One and three-fourths
3. Noah picks bushels of apples on Saturday. Each bushel holds 5 apples. If Noah picks 9 bushels of apples, how many apples did Noah pick altogether?



- A. 4
- B. 14
- C. 40
- *D.45

Objective 2: Algebraic Reasoning

This part relates to your knowledge of identifying number patterns and describing relationships between numbers. It includes 5 questions.

Study Tips for Objective 2

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

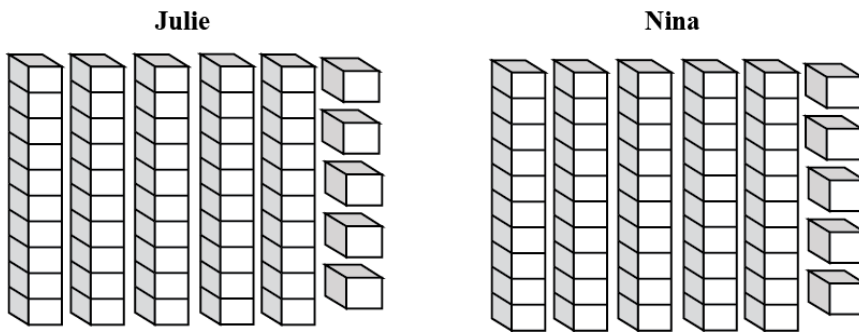
- Determine whether a number is even or odd
- Use place value to find a number that is 10 or 100 more or less than a given number up to 1,200
- Solve addition and subtraction word problems where any term may represent an unknown

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.

4. Julie and Nina each composed the same numbers using base ten blocks.



If Julie and Nina join their blocks together, which of the following is true?

- A. The total will be odd because 55 is an odd number.
 - B. The total will be odd because joining two odd numbers results in an odd number.
 - C. The total will be even because joining two even numbers results in an even number.
 - *D. The total will be even because joining two of the same number results in an even number.
5. What is 10 less 503?

- A. 490
- B. 493
- C. 513
- D. 593

Objective 3: Geometry and Measurement

This part relates to your knowledge of attributes and properties of two-dimensional shapes and three-dimensional solids as well as units to describe length and time. It includes 9 questions.

Study Tips for Objective 3

This part relates to TEKS 8A-9G. Familiarize yourself with those TEKS, and then be prepared to demonstrate knowledge of the following topics:


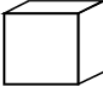



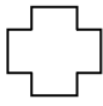
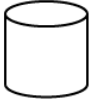


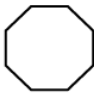
- Classify and sort three-dimensional solids and polygons with 12 or fewer sides based on their attributes
- Compose two-dimensional shapes and three-dimensional solids based on their attributes
- Decompose two-dimensional shapes
- Find the length of objects using concrete models
- Describe the relationship between the size of the unit and the amount of units needed to measure the length of an object
- Represent numbers from any location on a number line
- Find the length of an object using a variety of measurement tools
- Solve problems involving length
- Estimate lengths
- Find the area of a rectangle using square units
- Read and write time to the nearest minute

Sample Questions for Objective 3

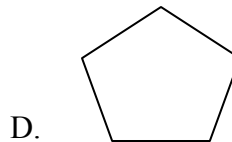
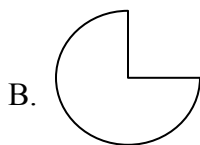
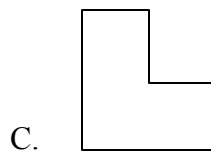
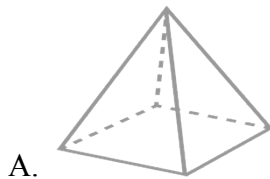
The following are sample questions. You can find the correct answers listed at the end of this study guide, but try answering the questions without looking at the answers first to check your comprehension.

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

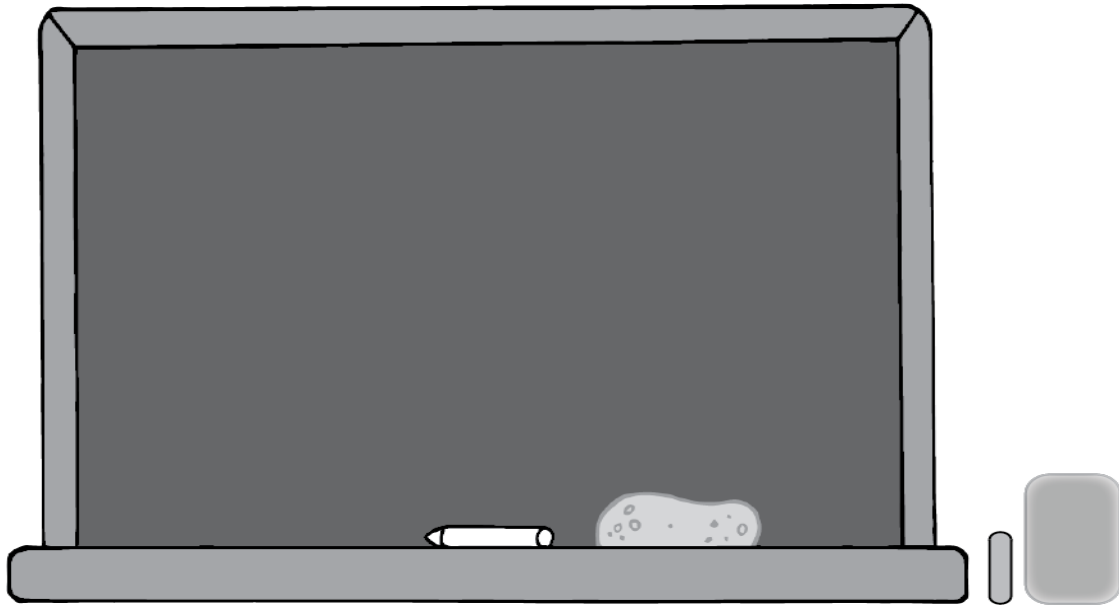
6. Robin created the table below to sort two-dimensional shapes and three-dimensional solids based on the number of vertices each figure has.

5 or FEWER Vertices	MORE than 5 Vertices
	
	
	
	
	

Which figure below has MORE than 5 vertices?



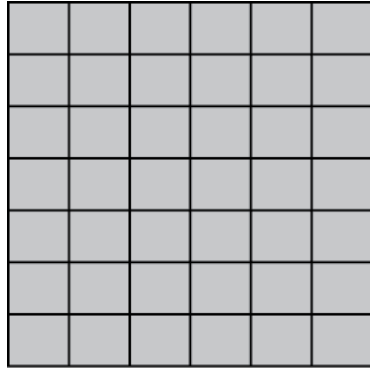
7. Terrell wants to measure the classroom chalkboard with either pieces of chalk or erasers. He places each object next to the chalkboard.



Which of the statements is true?

- A. Terrell will need the same amount of chalk and erasers to measure the chalkboard.
- B. Terrell will need more erasers than pieces of chalk because the erasers are longer than the pieces of chalk.
- C. Terrell will need more pieces of chalk than erasers to measure the chalkboard because the pieces of chalk are shorter than the erasers.
- D. Terrell will need fewer pieces of chalk than erasers to measure the chalkboard because the pieces of chalk are shorter than the erasers.

8. Mr. Smith mopped his tiled kitchen floor over the weekend. Below is a model of his kitchen floor.



If each tile represents a square unit, what is the area of Mr. Smith's kitchen floor?

- A. 13 square feet
- B. 26 square feet
- C. 41 square feet
- D. 42 square feet

Objective 4: Data Analysis

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

Study Tips for Objective 4

This part relates to TEKS 10A-10D. Familiarize yourself with those TEKS, and then be prepared to demonstrate knowledge of the following topics:

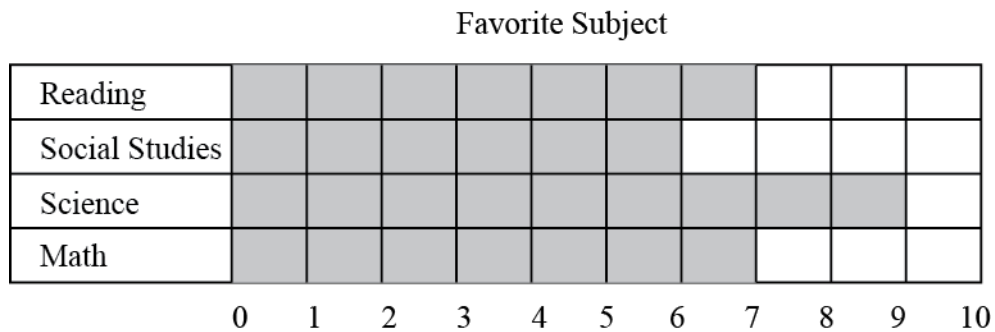
- Explain that the length of a bar in a bar graph or number of pictures in a pictograph represents a number
- Organize data in bar graphs and pictographs
- Solve addition and subtraction problems and using data in bar graphs and pictographs
- Draw conclusions from data in bar graphs and pictographs

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. Patterson’s students voted on their favorite subject and created a bar graph to display the data. Based on the information in the bar graph, which of the following statements is true?



- A. Social Studies and Math have the same amount of votes.
 B. Math is the most popular subject in Mr. Patterson’s class.
 C. Reading and Math combined have more votes than Social Studies and Science combined.
 D. Math and Social Studies combined have less votes than Reading and Science combined.

10. Katie created a pictograph to display how many items she sold at the school store.

Items Sold

Pencils	Erasers	Notepads	Rulers
			
			
			
			
			
			
			
			

If 2 votes are added to the least popular item, what would be the amount of total amount of items Katie sold at the school store?

- A. 6
- B. 22
- C. 26
- D. 24

Objective 5: Personal Financial Literacy

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

Study Tips for Objective 5

This part relates to TEKS 11A-11F. Familiarize yourself with those TEKS, and then be prepared to demonstrate knowledge of the following topics:

- Calculate money saved over time
- Explain that money can be saved rather than spent
- Distinguish between withdrawing and depositing money
- Identify examples of borrowing and know the difference between responsible and irresponsible borrowing
- Identify examples of lending and evaluate lending decisions
- Differentiate between producers and consumers
- Calculate the cost of producing a simple item

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. Renee's mom opened a savings account at a bank and deposited \$800 in the account. A week later, she withdrew \$175 from the account. How much money is in the savings account now?
- A. \$625
 - B. \$725
 - C. \$775
 - D. \$975

12. Emmett needs to borrow \$100. Four of his classmates have offered to lend him the money. He will pay them back within one month.

- Stanley can loan him \$100, and Emmett must pay him \$1.00 for each day it takes him to pay Stanley back.
- Gloria can loan him \$100, and Emmett must pay her \$10 for each day it takes him to pay Gloria back.
- Margaret can loan him \$100, and Emmett must pay her an additional \$0.50.
- Jason can loan him \$200, and Emmett does not have to pay him an additional fee.

Which classmate has offered the most responsible lending choice?

- A. Jason
- B. Gloria
- C. Stanley
- D. Margaret

Answer Key

Item Number	Correct Answer	TEKS expectation
1	C	2A, 2F, 4C
2	D	3A, 3C
3	D	6A
4	D	7A
5	B	7B
6	C	8B, 8C
7	C	9B
8	D	9F
9	D	10B, 10D
10	C	10B, 10C, 10D
11	A	11C
12	D	11D