



3rd 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#111.5>. Refer to section (b), Knowledge and skills, 1A–9F.

Throughout this guide, you'll see TEKS references. These refer to the numbers listed under (c) 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 46 multiple-choice questions which 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 (17 questions)

Objective 2: Algebraic Reasoning (6 questions)

Objective 3: Geometry and Measurement (11 questions)

Objective 4: Data Analysis (6 questions)

Objective 5: Personal Financial Literacy (6 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 17 questions.

Study Tips for Objective 1

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

- Compose and decompose numbers up to 100,000
- Describe the relationship in the base 10 place value system through the hundred thousands place
- Use number lines to round to the nearest ten, hundred, thousand, or ten thousand
- Compare and order numbers up to 100,000
- Represent fractions less than or equal to 1 whole with denominators of 2, 3, 4, 6, and 8 using objects, models, strip diagrams, and number lines
- Determine the corresponding fraction as a specific point on a number line
- Explain that fractions are partitioned into equal parts and that a unit fraction is one part of the whole
- Compose and decompose fractions
- Solve problems involving partitioning objects or a set of objects
- Represent equivalent fractions using models and number lines and explain that two fractions are equivalent if they are represented by the same point on a number line or represent the same portion of a same size whole
- Compare two fractions
- Solve one or two-step addition and subtraction problems within 1,000
- Estimate solutions to addition and subtraction problems by rounding to the nearest tens or hundreds place
- Determine the value of a collection of bills and coins
- Determine the total number of objects in arrays up to 10 by 10
- Represent multiplication facts using a variety of approaches
- Recall multiplication facts up to 10 by 10 with corresponding division facts
- Multiply two-digit numbers by one-digit numbers
- Understand that division is partitioning objects into equal groups

- Determine if a number is even or odd by dividing the number by 2
- Determine a quotient using the relationship between number in fact families
- Solve one and two-step problems involving multiplication and division within 100

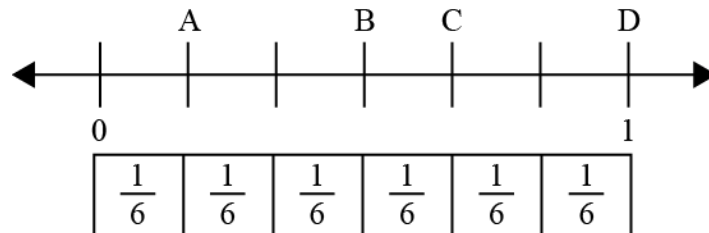
Sample Questions for Objective 1

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. Jessica has collected 421 seashells and Jin has collected 175 seashells. Which number sentence represents the **BEST** way to estimate how many more seashells Jessica has than Jin?
 - A. $400 + 100 = 500$
 - B. $400 - 200 = 200$
 - C. $500 - 100 = 300$
 - D. $400 + 200 = 600$

2. Tommy planted a tomato plant. It grew $\frac{1}{6}$ of an inch every week.



Which point on the number line represents the growth of the tomato plant after 4 weeks?

- A. Point A because the seedling grows $\frac{1}{6}$ of an inch every week
- B. Between Point A and Point B because $\frac{1}{6} + \frac{1}{6} = \frac{2}{6}$
- C. Point C because $\frac{1}{6} + \frac{1}{6} + \frac{1}{6} + \frac{1}{6} = \frac{4}{6}$
- D. Between Point C and D because $\frac{1}{6} + \frac{1}{6} + \frac{1}{6} + \frac{1}{6} + \frac{1}{6} = \frac{5}{6}$

3. Coach Fussell has 2 cases of energy bars. There are 24 energy bars in each case. She wants to share the energy bars equally among 8 soccer players. What steps should Coach Fussell take to figure out how many energy bars each soccer player receives?
- A. She should add 2 and 24, then subtract 8 from the sum
 - B. She should multiply 2 by 24, then divide the product by 8
 - C. She should divide 24 by 2, then multiply the quotient by 8
 - D. She should subtract 24 and 2, then divide the difference by 8

Objective 2: Algebraic Reasoning

This part relates to your knowledge of analyzing and creating patterns and relationships. It includes 6 questions.

Study Tips for Objective 2

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

- Represent and solve addition and subtraction problems to a thousand using models, number lines, and equations
- Represent and solve multiplication and division problems within 100 using arrays, strip diagrams, and equations
- Describe a multiplication expression as a comparison
- Determine the unknown whole number in a multiplication or division equation
- Represent relationships using number pairs in a table

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.

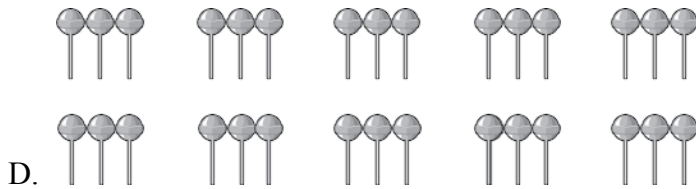
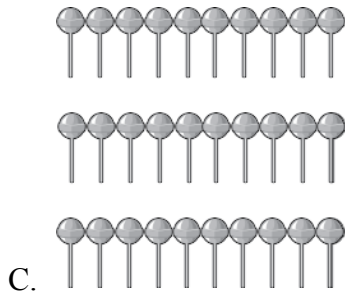
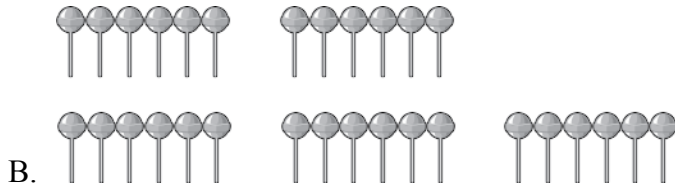
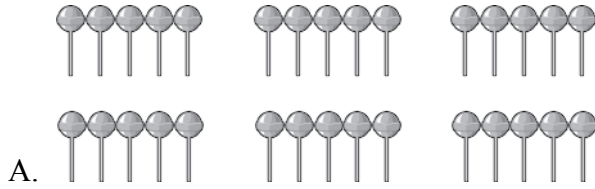
4. The table below represents how many chairs are placed at each table in the cafeteria at Sunset Valley Elementary School.

Number of Chairs	Number of Tables
16	2
32	4
48	6
64	8

According to the relationship shown in the table, how many baseball cards would there be in 12 packages?

- A. 24
- B. 72
- C. 80
- D. 96

5. Lesley has 30 lollipops. She decided to split the lollipops equally between herself and 5 friends. Which grouping below correctly shows how Lesley split the lollipops equally?



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 11 questions.

Study Tips for Objective 3

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

- Classify and sort two and three-dimensional solids based on attributes
- Use attributes to recognize examples of quadrilaterals
- Determine the area of rectangles
- Decompose figures formed by rectangles to determine the area of the original figure
- Decompose two congruent figures into equal parts and recognize that equal parts of congruent figures do not need to have the same shape
- Represent fractions on a number line
- Determine the perimeter of a shape or a missing length when given the perimeter and the length of the remaining sides
- Solve addition and subtraction problems involving intervals of time using models or tools
- Determine when to use measurements of capacity or weight and use appropriate units and tools to correctly measure capacity or weight

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.

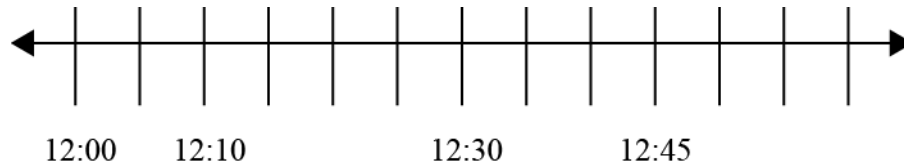
DIRECTIONS: Select the **BEST** response to each of the following questions.

6. Kristina's mom fills the bathtub so Kristina can take a bubble bath. What is the best estimate of how much water a bathtub can hold?

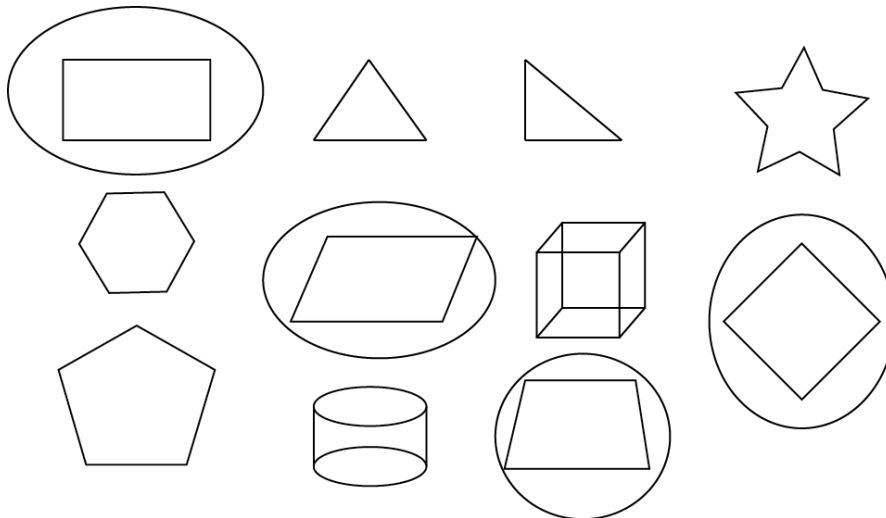


- A. 50 cups
- B. 10 pints
- C. 1 quart
- D. 50 gallons

7. Jimmy began practicing basketball at 12:05 pm. He practiced for 35 minutes and then immediately walked home. If it takes him 15 minutes to walk home, what time did he arrive at home?



- A. 12:40pm
 B. 12:45 pm
 C. 12:55 pm
 D. 1:00 pm
8. Josie needs a frame for a square mirror in her bedroom. If the perimeter of the square mirror is 48 inches, what is the length of one side of the mirror?
- A. 8 inches
 B. 12 inches
 C. 18 inches
 D. 24 inches
9. Arthur circled the shapes below because they are all examples of what?



- A. Cubes
 B. Squares
 C. Rectangles
 D. Quadrilaterals

Objective 4: Data Analysis

This part relates to your knowledge of organizing, interpreting, and solving problems related to data. It includes 6 questions.

Study Tips for Objective 4

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

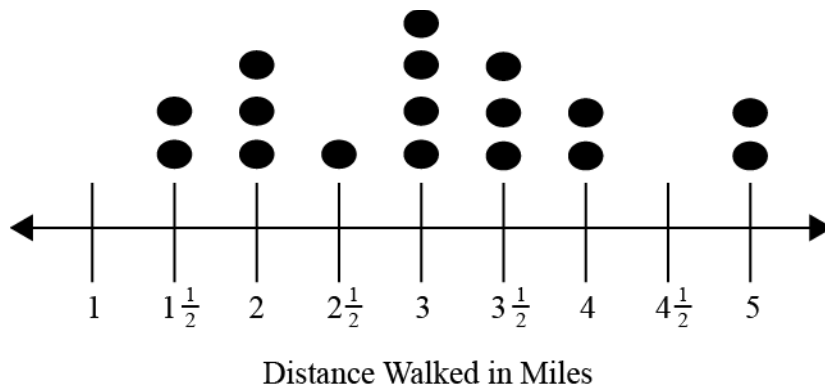
- Summarize a set of data using a frequency table, dot plot, pictograph, or bar graph
- Solve problems using data represented in a frequency table, dot plot, pictograph, or bar graph

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.

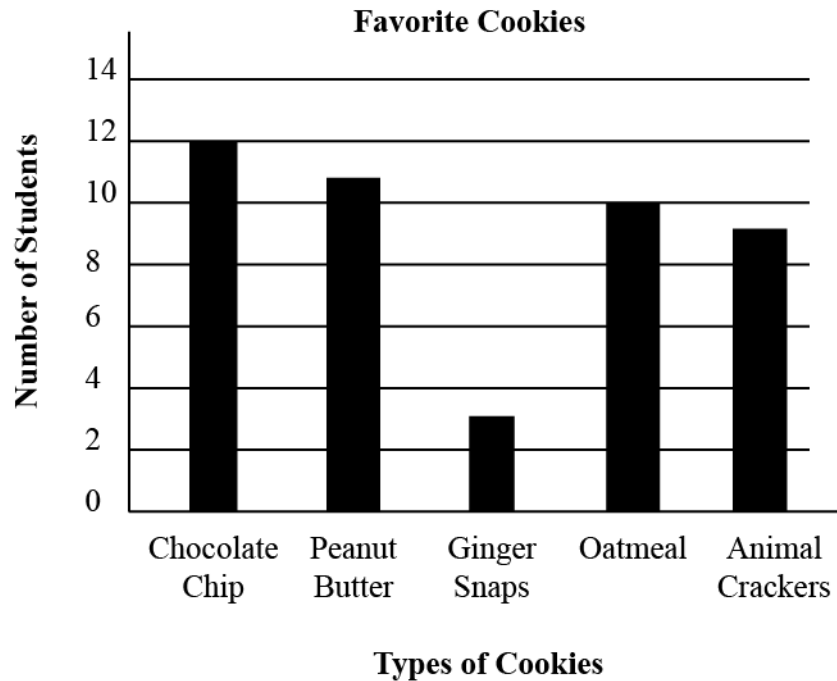
10. Ms. Langley's students took part in a walk-a-thon to raise money for the local animal shelter. The lengths each student walked to the nearest $\frac{1}{2}$ mile is displayed in the dot plot below.



According to the dot plot, how many students walked more than 3 miles?

- A. 4
- B. 7
- C. 11
- D. 17

11. The third grade students at Zavala Elementary School voted for their favorite type of cookie. They displayed the results in the bar graph below.



Based on the data in the bar graph, which statement is true?

- A. 3 more students voted for peanut butter than oatmeal.
- B. 15 students voted for peanut butter and ginger snaps combined.
- C. Ginger snaps and animal crackers combined have the same amount of votes as chocolate chip.
- D. More students voted for chocolate chip and ginger snaps than peanut butter and animal crackers.

Objective 5: Personal Financial Literacy

This part relates to your knowledge of managing financial resources effectively. It includes 6 questions.

Study Tips for Objective 5

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

- Explain the connection between labor and income
- Describe how the availability of resources impacts costs
- Identify the costs and benefits of spending decisions
- Explain credit
- List reasons to save and explain the benefit of a savings plan
- Identify decisions involving income, spending, saving, credit, and donating

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.

12. Mr. Rebel’s third grade class decided to try to raise money for a field trip. They decided to sell handmade greeting cards. They were able to create 40 greeting cards each week and created a table to show the relationship between the availability and demand for their handmade greeting cards.

	Week 1	Week 2	Week 3	Week 4	Week 5
Number of Greeting Cards Available	40	40	40	40	40
Demand for Greeting Cards	37	45	50	57	63

If the third graders decided to continue the fundraiser, what is the best option to make their fundraiser more successful?

- A. Create more greeting cards
- B. Sell the greeting cards at a lower price
- C. Sell cookies rather than greeting cards
- D. Advertise the greeting cards in the newspaper

13. Mrs. Corningstone earns \$1,000 a month. She created a budget to keep track of her expenses.

Monthly Budget
\$1000

Monthly Expenses	
Rent	\$500
Bills	\$175
Clothing	\$50
Food	\$100

According to her monthly budget, what would happen if Mrs. Corningstone had to pay \$200 for a car repair?

- A. Mrs. Corningstone would have enough money to pay for the car repair because she has \$225 left in her monthly budget for an unexpected expense.
- B. Mrs. Corningstone would have enough money to pay for the car repair because she has \$275 left in her monthly budget for an unexpected expense.
- C. Mrs. Corningstone would NOT have enough money to pay for the car repair because she only has \$125 left in her monthly budget for an unexpected expense.
- D. Mrs. Corningstone would NOT have enough money to pay for the car repair because she only has \$175 left in her monthly budget for an unexpected expense.

Answer Key

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