



Mathematics Student Guide QCC Version

A Guide for Students
Preparing for the
Georgia High School
Graduation Tests

Mathematics

Includes:

- Description of the Content of the Test
- Sample Mathematics Test Items and Explanations
- Practice Questions

NOTE: This document is intended as a student aid.
Please photocopy as necessary for student use.

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INTRODUCTION

The Georgia High School Graduation Tests

To earn a high school diploma in Georgia, all students must pass tests in English language arts, mathematics, science, social studies, and writing. The content tests are referred to as the Georgia High School Graduation Tests (GHS GT). The writing test is referred to as the Georgia High School Writing Test (GHS WT). Students take all five tests for the first time in the 11th grade.

For a detailed explanation of the GHS GT, refer to the Department of Education's Web site: http://public.doe.k12.ga.us/ci_testing.aspx?PageReq=CI_TESTING_GHS GT

The Georgia High School Graduation Test in Mathematics

This document is designed to help you prepare for the graduation test in mathematics. The mathematics test reflects the Quality Core Curriculum (QCC).

If you are an 11th-grade student, you must take the test in the spring of the 11th grade. Students who are unsure when they should take the test should contact their school counselor.

Students who have taken the test without passing may retest at any administration. You will have up to five opportunities to take and pass the test between the spring administration of your 11th grade year and the summer of 12th grade.

If you do not pass the mathematics test but have met all other graduation requirements, you may be eligible for a certificate of performance or a special education diploma. If you leave school with a certificate of performance or a special education diploma, you may retake the test as often as necessary to qualify for a high school diploma.

Students who meet certain criteria may be eligible to apply to the State Board of Education for a waiver or variance. Refer to the Georgia Department of Education's Web site for more information.

CONTENT COVERED ON THE MATHEMATICS GHS GT

This document is designed as a supplement to the *Test Content Descriptions* for mathematics. The strands and their respective weights are included here. However, please refer to the *Test Content Descriptions* for further description of the tested objectives. The Test Content Description may be found on the Georgia Department of Education's Web site:

http://www.doe.k12.ga.us/ci_testing.aspx?folderID=227&m=links&ft=Content%20Descriptions

Strands of the QCC Mathematics GHS GT

The content in the Mathematics GHS GT is grouped into the four sections called strands (or major areas relating to mathematics) described below. The sample test items that appear on pages 9 through 12 of this student guide are representative of the items found on the actual GHS GT. The percentages given for each strand indicate the emphasis it is given on the test.

Strand 1: *Number and Computation* (17-19% of the test)

These items test uses and properties of numbers, operations, computing with integers, decimals, fractions, percents, and proportions. Real-world applications include various aspects of using money as well as estimation and problem solving (e.g., which operation to use).

Strand 2: *Data Analysis* (19-21% of the test)

These items test use of exact and approximate numbers, probability, and ability to read and interpret graphs and tables. Statistical measures such as mean, median, mode, and range are also assessed.

Strand 3: *Measurement and Geometry* (32-34% of the test)

These items test estimation and determination of length, area, volume, weight/mass, time, and temperature. Understanding of similar and congruent figures, use of proportions to find missing measurements of figures, and use of scale drawings are also assessed. The ability to use a coordinate plane is tested, as well as geometric properties and figures, how to solve problems with angles, and use of the Pythagorean theorem. (Formulas are given when needed.)

Strand 4: *Algebra* (28-30% of the test)

These items test algebraic principles such as evaluating and simplifying algebraic expressions, solving equations, and working with ratios and proportions.

While test score reports provide scaled scores for each of these strands, it is performance on the overall test that is of primary importance. Strand scores are provided to give students, teachers, and parents/guardians an idea of students' relative strengths and weaknesses. It is important to remember that while the overall difficulty of the test remains the same from one edition to the next, difficulty for a particular strand may vary. Thus, some students who score below 500 on a given strand on one occasion may score above 500 on the same strand on a subsequent occasion. Over the course of several tests, a student may even score above 500 on all four strands without passing the test.

PREPARING FOR THE TEST

The Mathematics Test Content Descriptions QCC Version describes the content that you can expect to find on the test. To review what you have learned in your mathematics courses, you may use any high school textbook that covers algebra, geometry, and data analysis.

The sample test items that appear on pages 9–12 are representative of test items that assess content knowledge of each of the four strands. There is also a practice test of 35 questions on pages 13 through 21 to help you prepare to take the actual test.

Finally, you may use questions in the Georgia Online Assessment System for further practice. You may locate a link to the Georgia Online System on the Georgia Department of Education home page, www.gadoe.org.

What you will find on the test

The mathematics test consists of between 60 and 75 multiple-choice questions. Each question has four possible answers; only **one** of the four choices is the correct answer.

The following sample item explains the parts of a test question.

Lunch sales at Judy’s Hamburger Haven are shown in this chart

Day	Lunch Sales
Sunday	\$108.65
Monday	\$205.35
Tuesday	\$190.10
Wednesday	\$265.50
Thursday	\$215.15
Friday	\$225.25
Saturday	\$225.25

Stimulus

Based on the data in the chart, what is the median amount of sales?

Stem

- A. \$156.85 < Distractor
- B. \$205.04 < Distractor
- C. \$215.15 < Correct
- D. \$225.25 < Distractor

Answer Choices

Stimulus: information you must use to answer the question

Stem: the question or statement to be answered (pay particular attention to **bold** words)

Distractors: answer choices you might select; one of the four choices is the correct answer

You should be able to complete the test in 60 minutes. However, you have up to 3 hours and 10 minutes if needed.

The questions on the test require a range of thinking skills. Some questions may involve interpreting a graph or table. Others may involve applying a formula.

We use the term **Depth of Knowledge (DOK)** to describe the degree of mental processing that is necessary to answer an item correctly.

Level 1

Level 1 includes the recall of information such as a fact, definition, term, or a simple procedure, as well as performing a simple algorithm or applying a formula. That is, in mathematics a one-step, well-defined, and straight algorithmic procedure should be included at this lowest level. Other key words that signify a Level 1 include “identify,” “recall,” “recognize,” “use,” and “measure.” Verbs such as “describe” and “explain” could be classified at different levels depending on what is to be described and explained.

Level 2

Level 2 includes the engagement of some mental processing beyond a habitual response. A Level 2 assessment item requires students to make some decisions as to how to approach the problem or activity, whereas Level 1 requires students to demonstrate a rote response, perform a well-known algorithm, follow a set procedure (like a recipe), or perform a clearly defined series of steps. Keywords that generally distinguish a Level 2 item include “classify,” “organize,” “estimate,” “make observations,” and “collect and display data,” and “compare data.” These actions imply more than one step. For example, to compare data requires first identifying characteristics of the objects or phenomenon and then grouping or ordering the objects. Some action verbs, such as “explain,” “describe,” or “interpret” could be classified at different levels depending on the object of the action. For example, if an item required students to explain how light affects mass by indicating there is a relationship between light and heat, this is considered a Level 2. Interpreting information from a simple graph, requiring reading information from the graph, also is a Level 2. Interpreting information from a complex graph that requires some decisions on what features of the graph need to be considered and how information from the graph can be aggregated is a Level 3. Caution is warranted in interpreting Level 2 as only skills because some reviewers will interpret skills very narrowly, as primarily visualization skills and probability skills, which may be more complex simply because they are less common. Other Level 2 activities include explaining the purpose and use of experimental procedures; carrying out experimental procedures; making observations and collecting data; classifying, organizing, and comparing data; and organizing and displaying data skills in tables, graphs, and charts.

Level 3

Level 3 requires reasoning, planning, and using evidence, and a higher level of thinking than the previous two levels. In most instances, requiring students to explain their thinking is a Level 3. Activities that require students to make conjectures are also at this level. The cognitive demands at Level 3 are complex and abstract. The complexity does not result from the fact that there are multiple answers, a possibility for both Levels 1 and 2, but because the task requires more demanding reasoning. An activity, however, that has more than one possible answer and requires students to justify the response they give would most likely be a Level 3. Other Level 3 activities include drawing conclusions from observations, citing evidence and developing a logical argument for concepts, explaining phenomena in terms of concepts, and using concepts to solve problems.

Examples of questions that represent these three levels can be found in the Sample Items and Explanations section on pages 9 through 12.

TAKING THE TEST

Many of the GHSGT questions involve tables and graphs. All test questions require careful reading of the directions, each question, **and** its four answer choices. Use these strategies to help you succeed on the test.

Guess intelligently.

There is no penalty for guessing on any GHSGT. If you are not sure of the correct answer you are encouraged to guess. Guessing is easier if you can eliminate one or more distractors as clearly incorrect. Be warned, however, that many of the distractors are very attractive because they are based on common mistakes students make.

Remember that there are no trick questions.

While it is important to read each question carefully, we have **not** included any trick questions. You should not spend time trying to figure out what we *really* mean. If you read the entire question, including all accompanying material, the meaning should be clear. We do not consider requiring a careful reading of the **entire** question to be a trick.

Consider every choice.

You must choose from the four answer choices the choice that **best** answers the question. Some of the distractors will be attractive because they include an irrelevant detail, a common misconception, or the right information applied in the wrong way.

Spend test time wisely.

Some tests are arranged so that the easiest items are first and the hardest are last. The mathematics GHSGT is not arranged that way. Therefore, it is possible to find several difficult questions followed by a set of easier questions. If you run into a few hard questions, do not get discouraged. Move on, answer as many questions as possible, and then go back and reattempt the harder questions.

You may have up to three hours to take the mathematics GHSGT. If you finish early, use the time to check your answers. However, it is still important to use your time wisely.

Read everything carefully.

There are several places where carelessness can cause you to answer incorrectly. The first is in the initial reading of the question. Read everything carefully. The second is in choosing the answer. You should evaluate each answer option critically to make sure it actually answers the question. The third possibility for making a mistake is in the transfer of the correct answer to your answer document. You should ask yourself two questions: "Am I on the right question number in the right section of the test?" and "Is this the answer I mean to mark?"

SAMPLE ITEMS AND EXPLANATIONS

The items provided in this section are sample items. These items should be considered **examples** of items and types of items that may be found on the mathematics test.

Strand 1: Numbers and Computation

1. The number 4:37 **most likely** represents a
 - A. distance.
 - B. score.
 - C. time.
 - D. ZIP code.

Correct Answer and Explanation:

Of the four options given, only **C** typically contains a colon. Thus, the other three options (distractors) can be eliminated.

Depth of Knowledge: This is a Level 1 item. It requires a basic recall of information.

Strand 1: Numbers and Computation

2. Which value is the greatest?
 - A. 4^2
 - B. 5^2
 - C. 2^3
 - D. 3^3

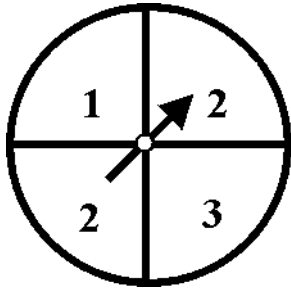
Correct Answer and Explanation:

In this problem, the student needs to compute each exponential number and then compare the results to determine which is the greatest. A is 4×4 , or 16. B is 5×5 , or 25. C is $2 \times 2 \times 2$, or 8. D is $3 \times 3 \times 3$, or 27. Thus, **D** is the correct answer since 27 is larger than the other three computations.

Depth of Knowledge: This is a Level 2 item because it requires computing the exponential numbers and then comparing the answers to find which is the greatest, but it does not require significant interpretation of the stem to determine the answer.

Strand 2: Data Analysis

3. What is the probability of spinning a “2” on this spinner?



- A. 0
- B. $\frac{1}{4}$
- C. $\frac{1}{2}$
- D. 1

Correct Answer and Explanation:

We can eliminate both A and D immediately, as A requires the arrow to not land anywhere or that there is no “2” on the spinner, and D requires the arrow to fall on “2” all the time. Upon initial review, the obvious choice may appear to be $\frac{1}{4}$, B, since there are four spaces on the spinner. However, closer scrutiny reveals that two of the sections on the spinner have the same number (2). The arrow therefore has a 2 out of 4, or $\frac{1}{2}$, chance of landing on “2”. Thus, **C** is the correct answer.

Depth of Knowledge: This is a Level 2 item because it requires some degree of interpretation beyond recall.

Strand 2: Data Analysis

4. In which situation would a result using approximate numbers be expected?
- A. the cost of two tickets to a West High baseball game
 - B. the number of buses bringing students to West High School each day
 - C. the number of people in attendance at a West High varsity football game
 - D. the number of points the West High varsity basketball team scored in Tuesday night's game

Correct Answer and Explanation:

Options A, B, and D all require precise numbers to gather the information these distractors call for. Only option **C** does not require a precise number—an approximation of the number of people in attendance at the game. An exact number is not needed here as with the other three distractors.

Depth of Knowledge: This is a Level 1 item. It requires simple recall.

Strand 3: Measurement and Geometry

5. The **best** estimate for the length of a boy's shoe is
- A. 10 inches.
 - B. 10 feet.
 - C. 10 yards.
 - D. 10 miles.

Correct Answer and Explanation: The answer must be 10 inches, **A**, as all the other measurements are extremely long for measuring a boy's shoe. Some students may trip on option B since it mentions the word "feet."

Depth of Knowledge: This is a Level 1 item. It requires recall of various lengths and when to use each one.

Strand 3: Measurement and Geometry

6. One gallon of paint will cover 800 square feet. How many gallons of paint are needed to cover a wall that is 8 feet high and 200 feet long?
- A. $\frac{1}{4}$
 - B. 2
 - C. 4
 - D. 8

Correct Answer and Explanation: This question requires students to know how to determine the area of a rectangle. The area (length \times width) of the wall in the question is 8×200 , or 1600 square feet. Dividing 1600 by 800 (the amount of paint one gallon will cover) yields the answer 2. Thus, **B** is the correct answer. The distractors are common mistakes made by students who do not know how to compute area. Option A is the reduction of 200 over 800. Option C is the result of 800 divided by 200. Option D comes from simply rewriting the 8 in the stem.

Depth of Knowledge: This is a Level 3 item. It requires students to know how to find the area of a rectangle and to know when finding the area will help solve a problem.

Strand 4: Algebra

7. Evaluate $(a + b) - 3c$, when $a = 7$, $b = 8$, and $c = 0$.
- A. 0
 - B. 5
 - C. 12
 - D. 15

Correct Answer and Explanation: The easiest means of solving this problem is to plug the values of the variables into the expression. The order of operations states that operations contained within parentheses should be completed first, followed by multiplication, and then subtraction. Our expression $(a + b) - 3c$ can be rewritten as $(7 + 8) - 3 \times 0$. Performing the operation in parentheses first, we get $7 + 8 = 15$. We next multiply 3×0 and get 0. Our reduced expression is $15 - 0$, or 15. Thus, the correct answer is **D**. The distractors may be appealing to those students who do not know how to evaluate an algebraic expression. Some students may choose A because they know that 0 times anything equals 0. Some students may choose B if they add $7 + 8$ and then divide by 3. Finally, some students may choose C if they first add $7 + 8$, then subtract 3.

Depth of Knowledge: This is a Level 3 item. It requires analyzing of a given expression determining the correct means of solving it.

PRACTICE QUESTIONS

Following are practice questions that you may use to help prepare for the Georgia High School Graduation Test in mathematics, which is based on the Quality Core Curriculum (QCC). These questions will **not** appear on the mathematics test, but are representative of some of the types of questions you should expect on the test. While working on these questions, it is a good idea to use the same calculator that you will use when taking the GHSGT. You may not use a graphing calculator or one which stores text. The answers are on page 22.

Strand 1: Number and Computation

- Which value is closest to 0.67?
 - $\frac{3}{9}$
 - $\frac{13}{26}$
 - $\frac{2}{3}$
 - $\frac{6}{7}$
- Compute the following.
 $(54 \times 10^{-3}) \div (9 \times 10^{-5})$
 - 6.0×10^{-8}
 - 60×10^{-8}
 - 6.0×10^2
 - 6.0×10^3
- Maria's dental plan pays 88% of the expenses after the deductible of \$150 is subtracted. Maria's total dental bill was \$547.
Which is the **best** estimate of the amount the insurance company will pay?
 - \$240
 - \$270
 - \$320
 - \$360
- The equation $3(4x + 2) = (4x + 2)3$ is true for all real numbers (x). Which property does this exemplify?
 - associative property of addition
 - associative property of multiplication
 - commutative property of multiplication
 - commutative property of addition
- Charles wants to buy a chair that is usually priced at \$75 but is now discounted by 30%. What is the sale price of the chair?
 - \$22.50
 - \$52.50
 - \$74.70
 - \$97.50
- Which tool is the **most** appropriate to estimate the cost of three items?
 - calculator
 - computer
 - mental arithmetic
 - paper and pencil

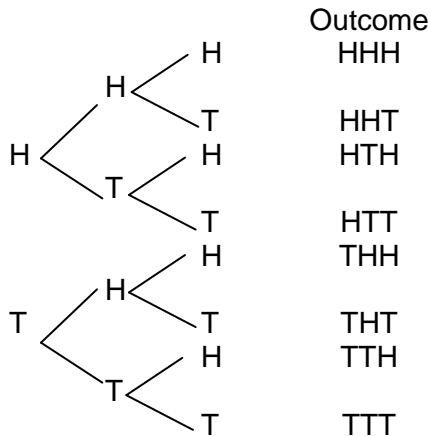
7. A total of 93 fifth-grade students voted in the student election. There are 117 students in the fifth grade.

What is the **best** estimate of the percent of fifth-grade students who voted in the student election?

- A. 80%
 - B. 85%
 - C. 90%
 - D. 95%
8. Steve can read 15 pages in 20 minutes. Approximately how many pages can he read in 1 hour?
- A. 15
 - B. 30
 - C. 45
 - D. 60

Strand 2: Data Analysis

9. Use the tree diagram to predict the probability of flipping 3 coins and getting all heads or all tails.



Based on the tree diagram what is the probability of flipping 3 coins and getting all heads (H) or all tails (T)?

- A. $\frac{1}{4}$
- B. $\frac{1}{2}$
- C. 1
- D. 2
10. If the mean number of people who attended six basketball games is 7,380, what was the total attendance at the six games?
- A. 1,230
- B. 7,380
- C. 22,140
- D. 44,280

11. Use the table to answer question 11.

State	Number of Cars
Mississippi	10
Alabama	7
Louisiana	50
Tennessee	4
Georgia	13

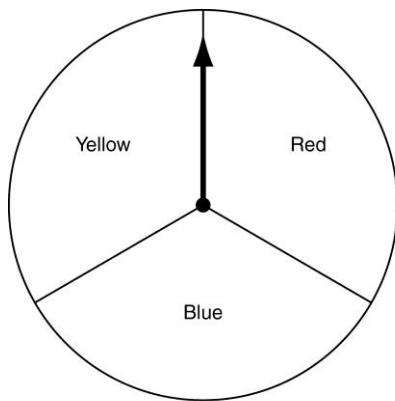
On her trip to Florida, Jane amused herself by counting license plates on cars. The table above summarizes her data. Which state was Jane **most likely** traveling through at the time of her survey?

- A. Alabama
- B. Georgia
- C. Louisiana
- D. Tennessee
12. This is Juan's monthly expense distribution.
- | | |
|----------------|-----|
| Taxes | 28% |
| Rent | 20% |
| Food | 17% |
| Utilities | 13% |
| Transportation | 12% |
| Clothing | 5% |
| Miscellaneous | 5% |
- Which type of graph should Juan use to show each expense as a part of his total expenditures?
- A. a bar graph
- B. a circle graph
- C. a line graph
- D. a pictograph

13. The odds of winning a prize are 2 : 5 . What is the probability of winning the prize?

- A. $\frac{2}{3}$
- B. $\frac{2}{5}$
- C. $\frac{2}{7}$
- D. $\frac{2}{10}$

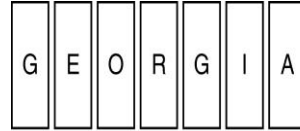
14. Hector will spin the arrow on this spinner two times.



What is the probability that the arrow will stop on the same color **both** times?

- A. $\frac{1}{9}$
- B. $\frac{2}{9}$
- C. $\frac{1}{3}$
- D. $\frac{2}{3}$

15. Helen placed these tiles into a bag.

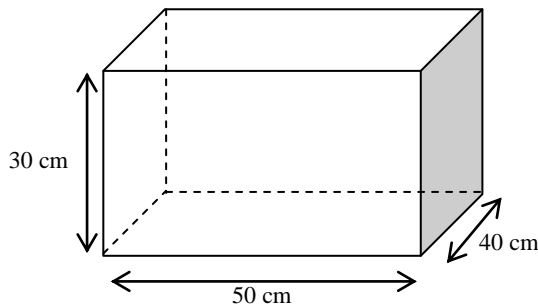


Helen will take a tile out of the bag at random. What is the probability that she will take out a tile with a vowel on it?

- A. $\frac{2}{7}$
- B. $\frac{3}{7}$
- C. $\frac{4}{7}$
- D. $\frac{5}{7}$

Strand 3: Measurement and Geometry

16. The number of tropical fish that an aquarium can hold depends on the volume of the fish tank. The interior dimensions of this fish tank are 50 cm, 40 cm, and 30 cm. Each fish requires 10,000 cubic centimeters of water.



How many tropical fish will the fish tank hold?

(Use $V = lwh$)

- A. 5
 - B. 6
 - C. 50
 - D. 60,000
17. A rotating sprinkler is used to water a yard. The radius of the area being sprayed is 10 feet.

What is the area of the wet part of the yard?

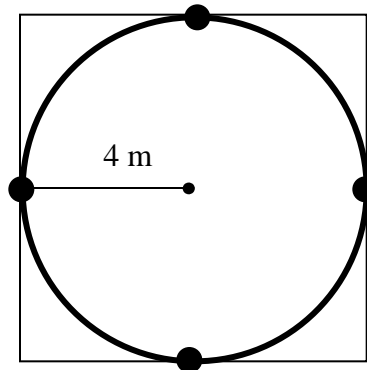
(Use $A = \pi r^2$ and $\pi = 3.14$)

- A. 31.4 square feet
- B. 301.4 square feet
- C. 314 square feet
- D. 3,140 square feet

18. On a map of Georgia, one inch is equivalent to 50 miles (1 inch = 50 miles). If the distance between two towns is $1\frac{3}{4}$ inches on the map, what is the actual distance between the towns?

- A. 8.75 miles
- B. 50.75 miles
- C. 65 miles
- D. 87.5 miles

19. This square has an area of 64 m^2 .



What is the area of the circle?

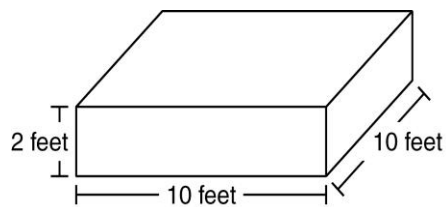
(Use $A = s^2$, $A = \pi r^2$, and $\pi = 3.14$.)

- A. 15.7 m^2
- B. 25.12 m^2
- C. 50.24 m^2
- D. 100.48 m

20. A farmer has 18 chickens. Each chicken lays 4 to 6 eggs each week.

Which expression represents the **best** estimate of the total number of eggs laid by the farmer's chickens each week?

- A. 10×5
 B. 15×10
 C. 20×5
 D. 20×10
21. A sandbox has the dimensions shown in this diagram.

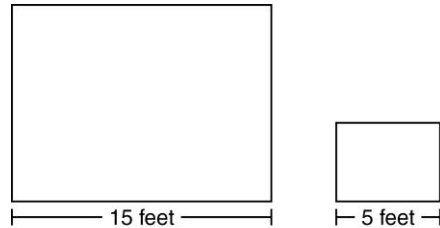


The sand box contains 80 cubic feet of sand. What is the remaining storage capacity of the sandbox?

(Use $V = lwh$)

- A. 280 cubic feet
 B. 200 cubic feet
 C. 120 cubic feet
 D. 80 cubic feet
22. Which unit of measurement is the **most** appropriate for the height of a building?
- A. grams
 B. meters
 C. milligrams
 D. millimeters

23. These rectangles are similar.



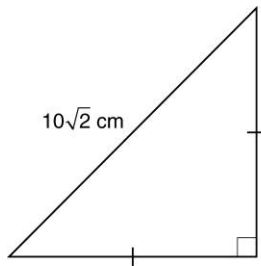
The perimeter of the large rectangle is 54 feet. What is the area of the small rectangle?

- A. 12 square feet
 B. 20 square feet
 C. 40 square feet
 D. 65 square feet
24. The volume of a sphere is 972π cubic centimeters. What is the diameter of the sphere?

(Use $V = \frac{4}{3}\pi r^3$)

- A. 9 centimeters
 B. 18 centimeters
 C. 309 centimeters
 D. 729 centimeters
25. Which shape **best** describes a basketball?
- A. cone
 B. sphere
 C. cylinder
 D. triangular prism

26. The hypotenuse of this isosceles right triangle has a length of $10\sqrt{2}$ cm.



What is the perimeter of the triangle?

- A. 10 cm
- B. 30 cm
- C. $20 + 10\sqrt{2}$ cm
- D. $30\sqrt{2}$ cm

Strand 4: Algebra

27. Simplify the expression below, if possible. (Note: $a \neq 0$)

$$\frac{2ab + a}{a}$$

- A. $2b$
B. $2ab$
C. $2b + 1$
D. It cannot be simplified.
28. Joe's age is shown by the expression $t - 12$, where t represents Tanya's age. If Tanya is 16, how old is Joe?

- A. 4
B. 12
C. 14
D. 28

29. A rectangular solid has these dimensions.

length = 6 millimeters
width = 4 millimeters
height = 2 millimeters

What is the volume of the solid?

(Use $V = lwh$)

- A. 12 mm^3
B. 14 mm^3
C. 20 mm^3
D. 48 mm^3

30. A clothing store at the mall had 34 sweaters in stock at the beginning of a sale. If x represents the number of sweaters sold during the sale, which expression shows the number of sweaters remaining?

- A. $x - 34$
B. $x + 34$
C. $34 - x$
D. $34x$

31. Which situation is represented by the algebraic expression $10 - x$?

- A. Tamara is x years old. How old was she 10 years ago?
B. Sumito is 10 years old. How old will he be in x years?
C. Ann is x years younger than Sheldon. How old is Sheldon?
D. Alfonso is 10 years old. How old was he x years ago?

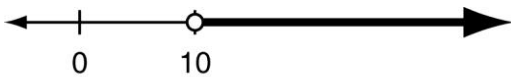
32. Which expression is equivalent to $x^5 \times x^7$?

- A. x^{12}
- B. x^{35}
- C. $2x^{12}$
- D. $2x^{35}$

33. Liz jogs 2 miles in 20 minutes. Which proportion could be used to determine how far she jogs in 55 minutes?

- A. $\frac{x}{2} = \frac{20}{55}$
- B. $\frac{2}{x} = \frac{55}{20}$
- C. $\frac{2}{20} = \frac{x}{55}$
- D. $\frac{20}{2} = \frac{x}{55}$

34. A solution to an inequality is graphed on this number line.



Which inequality has a solution represented by the graph?

- A. $x - 4 > 6$
- B. $x - 4 \geq 6$
- C. $x + 4 > 6$
- D. $x + 4 \geq 6$

35. What is the slope of the line that passes through point $R(10, -7)$ and point $S(-1, 15)$?

- A. -2
- B. $-\frac{1}{2}$
- C. $\frac{1}{2}$
- D. 2

ANSWERS TO PRACTICE QUESTIONS

Question Number	Strand	DOK Level	Answer
1	Number and Computation	1	C
2	Number and Computation	1	C
3	Number and Computation	2	D
4	Number and Computation	1	C
5	Number and Computation	1	B
6	Number and Computation	2	C
7	Number and Computation	2	A
8	Number and Computation	2	C
9	Data Analysis	2	A
10	Data Analysis	2	D
11	Data Analysis	2	C
12	Data Analysis	2	B
13	Data Analysis	2	C
14	Data Analysis	2	C
15	Data Analysis	2	C
16	Measurement and Geometry	2	B
17	Measurement and Geometry	1	C
18	Measurement and Geometry	1	D
19	Measurement and Geometry	2	C
20	Measurement and Geometry	2	C
21	Measurement and Geometry	2	C
22	Measurement and Geometry	1	B
23	Measurement and Geometry	3	B
24	Measurement and Geometry	3	B
25	Measurement and Geometry	1	B
26	Measurement and Geometry	3	C
27	Algebra	1	C
28	Algebra	1	A
29	Algebra	1	D
30	Algebra	2	C
31	Algebra	2	D
32	Algebra	1	A
33	Algebra	2	C
34	Algebra	2	A
35	Algebra	2	A

PERFORMANCE LEVEL DESCRIPTORS

Pass Plus

Your score indicates that you consistently and effectively use algebraic concepts to solve multi step and/or multivariable problems, apply statistics to draw conclusions and describe data, create or apply formulas to solve problems involving measurement and geometry, and consistently solve equations with one or variables.

Pass

Your score indicates that you apply algebraic concepts to solve problems, use statistics to draw conclusions and describe data, use formulas to solve problems involving measurement and geometry, and determine solutions to equations with one or more variables

Fail

Your score indicates that you may not consistently apply algebraic concepts, computational skills, formulas, or strategies to solve problems or to describe the characteristics of data.