New York State
EDUCATION DEPARTMENT
Knowledge › Skill › Opportunity

New York State Testing Program
Grade 4
Mathematics Test

Released Questions

2024

New York State administered the Mathematics Tests in May 2024
and is making approximately 75% of the questions
from these tests available for review and use.

New York State Testing Program
Grades 3–8 Mathematics

Released Questions from 2024 Exams

Background

As in past years, SED is releasing large portions of the 2024 NYS Grades 3–8 English Language Arts and Mathematics test materials for review, discussion, and use.

For 2024, included in these released materials are at least 75 percent of the test questions that appeared on the 2024 tests (including all constructed-response questions) that counted toward students' scores. Additionally, SED is also providing a map that details what each released question measures and the correct response to each question. These released materials will help students, families, educators, and the public better understand the tests and the New York State Education Department's expectations for students.

Understanding Math Questions

Multiple-Choice Questions

Multiple-choice questions are designed to assess the New York State P–12 Next Generation Learning Standards for Mathematics. Mathematics multiple-choice questions will be used mainly to assess standard algorithms and conceptual standards. Multiple-choice questions incorporate both the grade-level standards and the "Standards for Mathematical Practices." Many questions are framed within the context of real-world applications or require students to complete multiple steps. Likewise, many of these questions are linked to more than one standard, drawing on the simultaneous application of multiple skills and concepts.

One-Credit Constructed-Response Questions

One-credit constructed-response questions require students to complete a task and provide only their final answer. These one-credit questions will often require multiple steps, assessing procedural skills, as well as conceptual understanding and application. While students may show how they arrived at their final answer, only the final answer will be scored.

Two-Credit Constructed-Response Questions

Two-credit constructed-response questions require students to complete tasks and show their work. These two-credit response questions will often require multiple steps, the application of multiple mathematics skills, and real-world applications. Many of the short-response questions will cover conceptual and application standards.

Three-Credit Constructed-Response Questions

Three-credit constructed-response questions ask students to show their work in completing two or more tasks or a more extensive problem. These three-credit response questions allow students to show their understanding of mathematical procedures, conceptual understanding, and application. Three-credit response questions may also assess student reasoning and the ability to critique the arguments of others. The scoring rubric for all constructed-response questions can be found in the grade-level Educator Guides at https://www.nysed.gov/state-assessment/grades-3-8-ela-and-math-test-manuals.

New York State P–12 Next Generation Learning Standards Alignment

The alignment(s) to the New York State P–12 Next Generation Learning Standards for Mathematics is/are intended to identify the primary analytic skills necessary to successfully answer each question. However, some questions measure proficiencies described in multiple standards, including a balanced combination of procedure and conceptual understanding. For example, two-credit and three-credit constructed-response questions require students to show an understanding of mathematical procedures, concepts, and applications.

These Released Questions Do Not Comprise a "Mini Test"

To ensure it is possible to develop future tests, some content must remain secure. This document is *not* intended to be representative of the entire test, to show how operational tests look, or to provide information about how teachers should administer the test; rather, its purpose is to provide an overview of how the test reflects the demands of the New York State P–12 Next Generation Learning Standards.

The released questions do not represent the full spectrum of the standards assessed on the State tests, nor do they represent the full spectrum of how the standards should be taught and assessed in the classroom. It should not be assumed that a particular standard will be measured by an identical question in future assessments.

Name: _____

New York State Testing Program

Mathematics Test
Session 1

Grade 4

Spring 2024

RELEASED QUESTIONS

Session 1

TIPS FOR TAKING THE TEST

Here are some ideas to help you do your best:

- Read each question carefully. Take your time.
- You have a ruler and a protractor that you can use on the test if they help you answer the question.

1 Carter has 9 comic books. Ben has 3 times as many comic books as Carter. How many comic books does Ben have?

A 6

B 12

C 24

D 27

2 What value makes the equation shown below true?

$$\frac{3}{4} = \frac{9}{?}$$

A 3

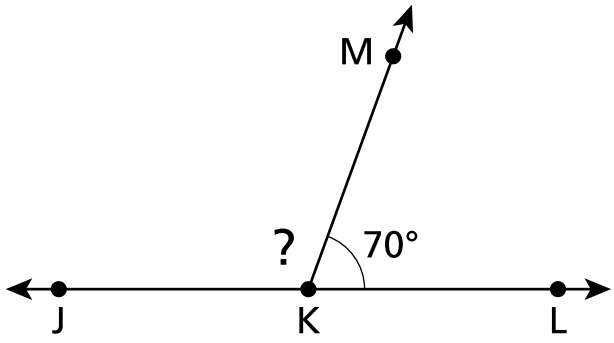
B 9

C 12

D 16

GO ON

7 Ray KM divides straight angle JKL into two parts as shown below.



Which equation represents how to find the measure, in degrees, of angle JKM ?

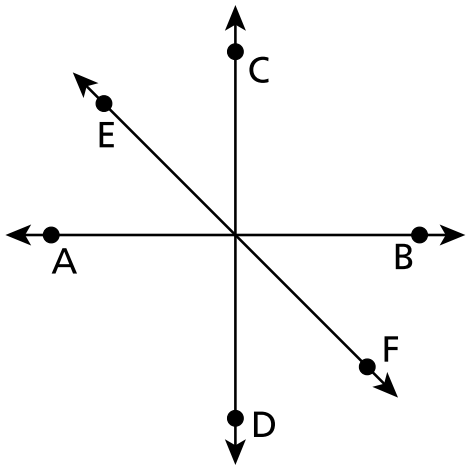
A $90 - 20 = \underline{\ ?\ }$

B $90 - 70 = \underline{\ ?\ }$

C $180 - 70 = \underline{\ ?\ }$

D $180 - 110 = \underline{\ ?\ }$

10 Which statement about the diagram shown below is **most likely** true?



A Line AB is perpendicular to line CD.

B Line AB is parallel to line CD.

C Line EF is perpendicular to line CD.

D Line EF is parallel to line CD.

GO ON

11 Which fraction can be added to $\frac{4}{12}$ to equal 1 whole?

A $\frac{1}{12}$

B $\frac{4}{12}$

C $\frac{6}{12}$

D $\frac{8}{12}$

12 Which number, when rounded to the nearest thousand, is 17,000 ?

A 16,129

B 16,921

C 17,538

D 17,853

15 Allison is training for a race. She runs $\frac{8}{10}$ mile each day. Which fraction is equivalent to the number of miles Allison runs in 7 days?

A $\frac{56}{10}$

B $\frac{15}{10}$

C $\frac{56}{70}$

D $\frac{8}{70}$

16 What is the value of $102 \div 6$?

A 16

B 17

C 96

D 108

22 What is the value of the expression shown below?

$$4\frac{1}{4} - 2\frac{2}{4}$$

A $1\frac{1}{4}$

B $1\frac{3}{4}$

C $2\frac{1}{4}$

D $2\frac{3}{4}$

23 How many hundreds are in 1,000 ?

A 1

B 10

C 100

D 1,000

24 Which equation is **not** true?

A $5 \times \frac{3}{4} = \frac{15}{20}$

B $4 \times \frac{2}{5} = 8 \times \frac{1}{5}$

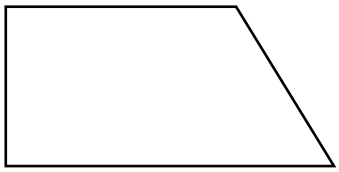
C $3 \times \frac{5}{6} = \frac{15}{6}$

D $2 \times \frac{4}{8} = 8 \times \frac{1}{8}$

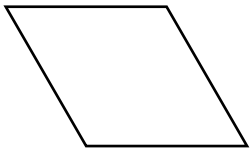
GO ON

26 Which figure appears to be a rectangle?

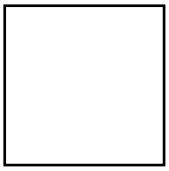
A



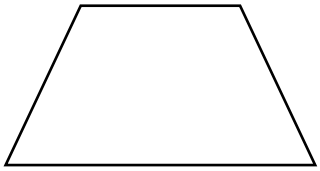
C



B



D



29 What is the product of 3 and 2,470 ?

A 6,210

B 6,213

C 7,410

D 7,413

GO ON

30 The perimeter of a square floor is 120 feet. What is the length, in feet, of each side of the floor?

A 20

B 30

C 40

D 60

STOP

Grade 4
Mathematics Test
Session 1
Spring 2024

Name: _____

New York State Testing Program

Mathematics Test
Session 2

Grade 4

Spring 2024

RELEASED QUESTIONS

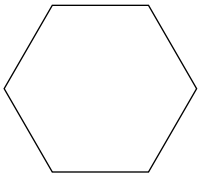
Session 2

TIPS FOR TAKING THE TEST

Here are some ideas to help you do your best:

- Read each question carefully. Take your time.
- You have a ruler and a protractor that you can use on the test if they help you answer the question.
- Be sure to show your work when asked.
- Be sure to explain your answer when asked.

31 A figure with all equal sides is shown below.



How many lines of symmetry does the figure have?

A 1

B 2

C 5

D 6

32 A group of 80 students goes to a zoo. The price for each student to ride the bus to the zoo is $3. The price for each student to get into the zoo is $2. What is the total price for all of the students to ride the bus and get into the zoo?

A $160

B $240

C $400

D $480

GO ON

33 Which number sentence shows a correct comparison?

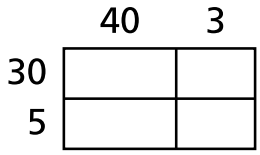
A $\frac{1}{3} > \frac{3}{4}$

B $\frac{4}{5} < \frac{1}{3}$

C $\frac{1}{3} = \frac{3}{4}$

D $\frac{3}{4} < \frac{4}{5}$

34 An incomplete area model is shown below. The area model can be used to represent the product of 35 and 43.



Which equation shows how to find the value of the area model after it is complete?

A $1{,}200 + 200 + 90 + 15 = 1{,}505$

B $1{,}200 + 20 + 90 + 15 = 1{,}325$

C $120 + 200 + 90 + 15 = 425$

D $120 + 20 + 90 + 15 = 245$

35 Which expression is equivalent to $2\frac{4}{6}$?

A $1+1+\frac{2}{3}+\frac{2}{3}$

B $\frac{6}{6}+\frac{6}{6}+\frac{2}{6}+\frac{1}{6}+\frac{1}{6}$

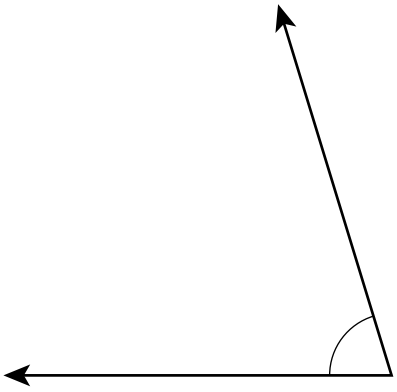
C $1+1+\frac{3}{3}+\frac{1}{3}$

D $\frac{6}{6}+\frac{6}{6}+\frac{1}{6}+\frac{1}{6}+\frac{1}{6}$

GO ON

36 **This question is worth 1 credit.**

What is the measure, in degrees, of the angle shown below?



Answer _____ degrees

37 **This question is worth 1 credit.**

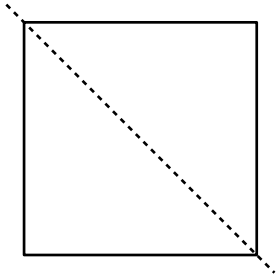
List all the factors of 21.

Answer _____

GO ON

38 **This question is worth 1 credit.**

A square is divided into two equal triangles as shown below.



What type of triangles are created when the square is divided into the two equal triangles?

Answer _____ triangles

39 **This question is worth 2 credits.**

A soccer team sold water bottles to earn money to buy new soccer balls. The team earned a total of $170. If the team pays $9 per soccer ball, what is the greatest number of soccer balls they can buy with the money earned?

Explain your answer.

40 **This question is worth 2 credits.**

Two numbers are shown below.

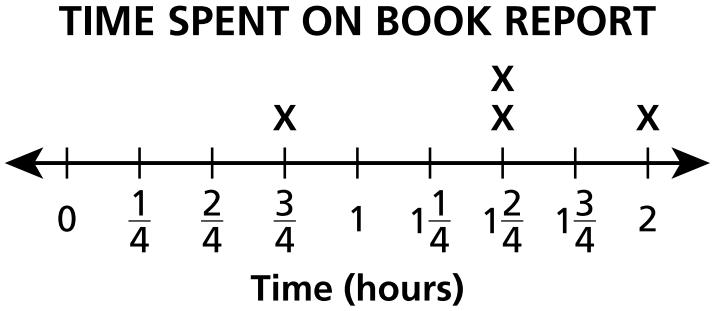
4,699 and 4,780

Write the two numbers in expanded form, and then compare them using the >, <, or = symbol. Be sure to include what you know about place value in your answer.

Explain how you know your answer is correct.

41 **This question is worth 2 credits.**

The line plot below shows the amount of time Jamie spent working on his book report each day for four days.



What is the total amount of time, in hours, that Jamie spent working on his book report for those four days?

Show your work.

Answer _____ hours

GO ON

42 **This question is worth 2 credits.**

Two expressions are shown below.

Expression A: $\frac{1}{4} \times 2$

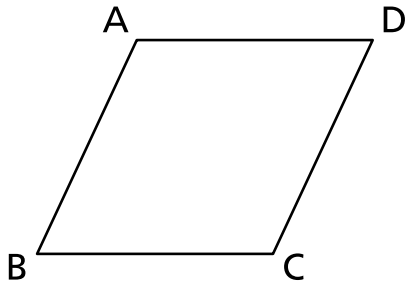
Expression B: $\frac{1}{2} \times 5$

Which expression, A or B, has a value greater than 1 ? Be sure to include the value of each expression in your answer.

Explain how you know your answer is correct.

43 **This question is worth 2 credits.**

A rhombus is shown below.



Use what you know about parallel, perpendicular, or intersecting sides to describe one pair of sides in the rhombus shown.

Explain how you know your answer is correct.

44 **This question is worth 3 credits.**

Chairs have been set up for an event. There are 11 rows of chairs with 12 chairs in each row. When the event is over, the chairs are put away on chair racks. If each chair rack holds exactly 9 chairs, what is the **fewest** number of chair racks needed to hold all of the chairs?

Explain how you know your answer is correct.

STOP

Grade 4
Mathematics Test
Session 2
Spring 2024

THE STATE EDUCATION DEPARTMENT

THE UNIVERSITY OF THE STATE OF NEW YORK / ALBANY, NY 12234

2024 Mathematics Tests Map to the Standards

Grade 4

Question	Type	Key	Points	Standard	Cluster	Subscore	Secondary Standard(s)
Session 1							
1	Multiple Choice	D	1	NGLS.Math.Content.NY-4.OA.2	Operations and Algebraic Thinking	Operations and Algebraic Thinking	
2	Multiple Choice	C	1	NGLS.Math.Content.NY-4.NF.1	Number and Operations - Fractions	Number and Operations - Fractions	
7	Multiple Choice	C	1	NGLS.Math.Content.NY-4.MD.7	Measurement and Data		
10	Multiple Choice	A	1	NGLS.Math.Content.NY-4.G.1	Geometry		
11	Multiple Choice	D	1	NGLS.Math.Content.NY-4.NF.3a	Number and Operations - Fractions	Number and Operations - Fractions	
12	Multiple Choice	B	1	NGLS.Math.Content.NY-4.NBT.3	Number and Operations in Base Ten	Number and Operations in Base Ten	
15	Multiple Choice	A	1	NGLS.Math.Content.NY-4.NF.4c	Number and Operations - Fractions	Number and Operations - Fractions	
16	Multiple Choice	B	1	NGLS.Math.Content.NY-4.NBT.6	Number and Operations in Base Ten	Number and Operations in Base Ten	
22	Multiple Choice	B	1	NGLS.Math.Content.NY-4.NF.3c	Number and Operations - Fractions	Number and Operations - Fractions	
23	Multiple Choice	B	1	NGLS.Math.Content.NY-4.NBT.1	Number and Operations in Base Ten	Number and Operations in Base Ten	
24	Multiple Choice	A	1	NGLS.Math.Content.NY-4.NF.4b	Number and Operations - Fractions	Number and Operations - Fractions	
26	Multiple Choice	B	1	NGLS.Math.Content.NY-4.G.2c	Geometry		
29	Multiple Choice	C	1	NGLS.Math.Content.NY-4.NBT.5	Number and Operations in Base Ten	Number and Operations in Base Ten	
30	Multiple Choice	B	1	NGLS.Math.Content.NY-4.MD.3	Measurement and Data		
Session 2							
31	Multiple Choice	D	1	NGLS.Math.Content.NY-4.G.3	Geometry		
32	Multiple Choice	C	1	NGLS.Math.Content.NY-4.OA.3a	Operations and Algebraic Thinking	Operations and Algebraic Thinking	
33	Multiple Choice	D	1	NGLS.Math.Content.NY-4.NF.2	Number and Operations - Fractions	Number and Operations - Fractions	
34	Multiple Choice	A	1	NGLS.Math.Content.NY-4.NBT.5	Number and Operations in Base Ten	Number and Operations in Base Ten	
35	Multiple Choice	B	1	NGLS.Math.Content.NY-4.NF.3b	Number and Operations - Fractions	Number and Operations - Fractions	
36	Constructed Response	n/a	1	NGLS.Math.Content.NY-4.MD.6	Measurement and Data		
37	Constructed Response	n/a	1	NGLS.Math.Content.NY-4.OA.4	Operations and Algebraic Thinking	Operations and Algebraic Thinking	
38	Constructed Response	n/a	1	NGLS.Math.Content.NY-4.G.2a	Geometry		
39	Constructed Response	n/a	2	NGLS.Math.Content.NY-4.NBT.6	Number and Operations in Base Ten	Number and Operations in Base Ten	
40	Constructed Response	n/a	2	NGLS.Math.Content.NY-4.NBT.2b	Number and Operations in Base Ten	Number and Operations in Base Ten	NGLS.Math.Content.NY-4.NBT.2a
41	Constructed Response	n/a	2	NGLS.Math.Content.NY-4.MD.4	Measurement and Data		
42	Constructed Response	n/a	2	NGLS.Math.Content.NY-4.NF.4a	Number and Operations - Fractions	Number and Operations - Fractions	
43	Constructed Response	n/a	2	NGLS.Math.Content.NY-4.G.1	Geometry		
44	Constructed Response	n/a	3	NGLS.Math.Content.NY-4.OA.3b	Operations and Algebraic Thinking	Operations and Algebraic Thinking	NGLS.Math.Content.NY-4.OA.3a

*This item map is intended to identify the primary analytic skills necessary to successfully answer each question. However, some questions measure proficiencies described in multiple standards, including a balanced combination of procedural and conceptual understanding.