



New York State
EDUCATION DEPARTMENT
Knowledge > Skill > Opportunity

New York State Testing Program
Grade 3
Mathematics Test

Released Questions

2023

New York State administered the Mathematics Tests in May 2023 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 2023 Exams

Background

As in past years, SED is releasing large portions of the 2023 NYS Grades 3–8 English Language Arts and Mathematics test materials for review, discussion, and use.

For 2023, included in these released materials are at least 75 percent of the test questions that appeared on the 2023 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 <http://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.

姓名: _____

Chinese (Simplified) Edition

Grade 3 2023

Mathematics Test

Session 1

May 2–4, 2023



纽约州测试计划 数学测试 第1部分

3 年级

2023年5月2–4日

RELEASED QUESTIONS

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第1部分



参加本次考试的提示

以下是一些建议,可以帮助你做到最好:

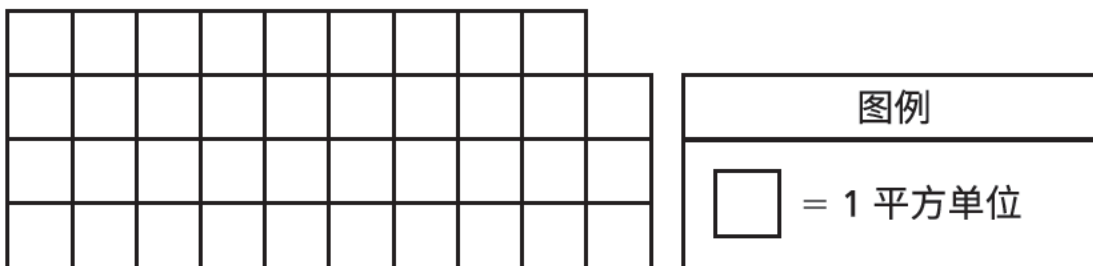
- 仔细阅读每一道题目,在做出选择前思考答案。
- 你已获得了一把尺子供你在考试中使用。你应当在认为这把尺子对你答题有帮助时使用它。

1 什么因数可使以下方程成立？

$$8 \times \underline{\quad? \quad} = 72$$

- A 6
- B 7
- C 8
- D 9

2 以下所示的图由单位正方形组成。



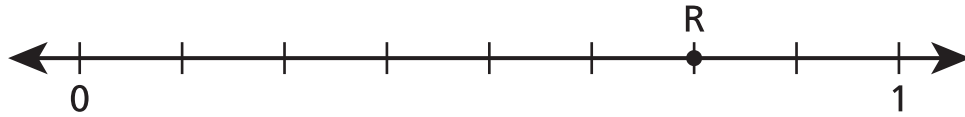
这个图的面积是多少平方单位？

- A 23
- B 26
- C 32
- D 39

继续

5

R点显示在下面的数轴上。



哪两个分数与R点所代表的数值相等？

A $\frac{1}{4}$ 和 $\frac{2}{8}$

B $\frac{2}{4}$ 和 $\frac{6}{8}$

C $\frac{2}{4}$ 和 $\frac{4}{8}$

D $\frac{3}{4}$ 和 $\frac{6}{8}$

6

玛德琳的袋子里正好有7枚硬币。每枚硬币的质量为5克。玛德琳的袋子里所有硬币的总质量是多少克？

A 2

B 12

C 35

D 40

继续

15 一个规则被用来创建如下所示的数字模式。

___?, 9, ___?, 21, 27

模式中缺少哪两个数字?

- A 3 和 12
- B 3 和 15
- C 6 和 12
- D 6 和 15

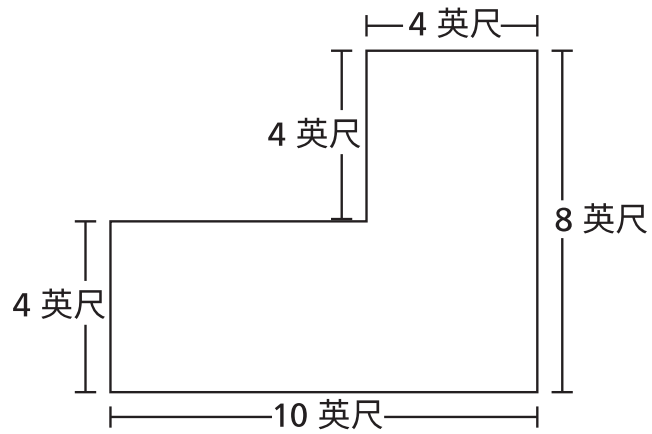
16 哪个分数等于 $\frac{4}{4}$?

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

继续

18

下图所示的形状是由两个矩形组合而成的。



该形状的面积是多少平方英尺？

- A 36
- B 40
- C 56
- D 80

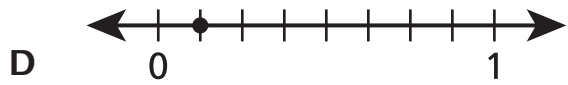
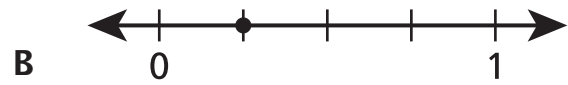
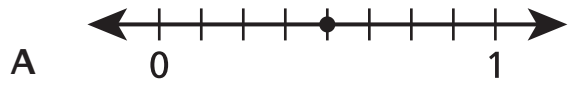
19

哪个表达式等同于 $4 \times (3 \times 2)$ ？

- A $2 + (3 + 4)$
- B $3 \times (4 \times 2)$
- C $2 \times (4 + 3)$
- D $3 + (2 \times 4)$

继续

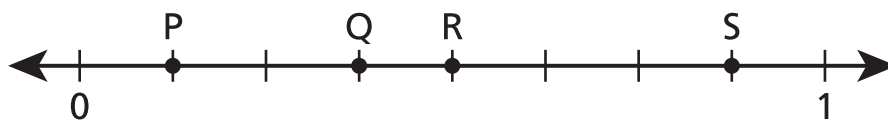
20 哪条数轴显示了位于 $\frac{1}{4}$ 的点?



23 求一个48平方单位的矩形的面积，需要多少个单位正方形？

- A 6
- B 8
- C 24
- D 48

24 下图中数轴上的哪一点代表分数 $\frac{4}{8}$ ？



- A 点P
- B 点Q
- C 点R
- D 点S

停止

3年级

2023

数学测试

第1部分

2023年5月2-4日

Grade 3

2023

Mathematics Test

Session 1

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姓名: _____

Chinese (Simplified) Edition

Grade 3 2023

Mathematics Test

Session 2

May 2–4, 2023



纽约州测试计划 数学测试 第2部分

3 年级

2023年5月2–4日

RELEASED QUESTIONS

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第2部分



参加本次考试的提示

以下是一些建议,可以帮助你做到最好:

- 仔细阅读每一道题目,在做出选择或写下答案前思考答案。
- 你已获得了一把尺子供你在考试中使用。你应当在认为这把尺子对你答题有帮助时使用它。
- 回答时务必写出你的演算过程。

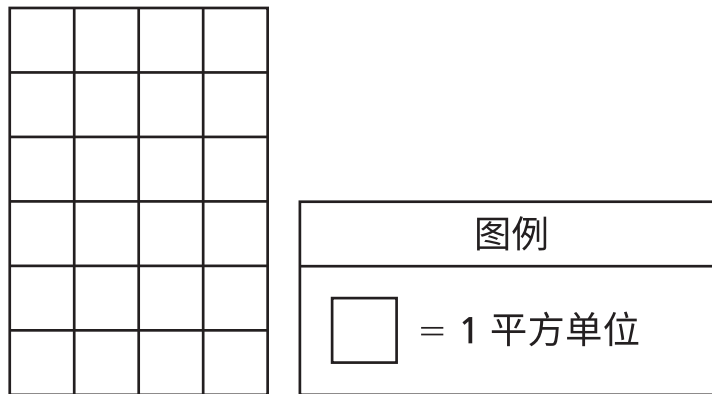
26

一名学生的盒子里有27个纸杯蛋糕。其中有10个带巧克力糖霜的纸杯蛋糕和11个带香草糖霜的纸杯蛋糕。其余的纸杯蛋糕 s 有草莓糖霜。 s 的值是多少？

- A 6
- B 8
- C 17
- D 21

27

下图所示的矩形的面积可以通过使用单位正方形求出。



这个矩形的面积是多少平方单位？

- A 10
- B 18
- C 20
- D 24

继续

28 华雷斯先生买了5包笔记本。每包有6本笔记本。他给他的3个孩子各发了同等数量的笔记本。每个孩子能得到多少本笔记本？

A 8

B 10

C 11

D 14

29 哪个分数等于 $\frac{2}{8}$ ？

A $\frac{1}{4}$

B $\frac{1}{6}$

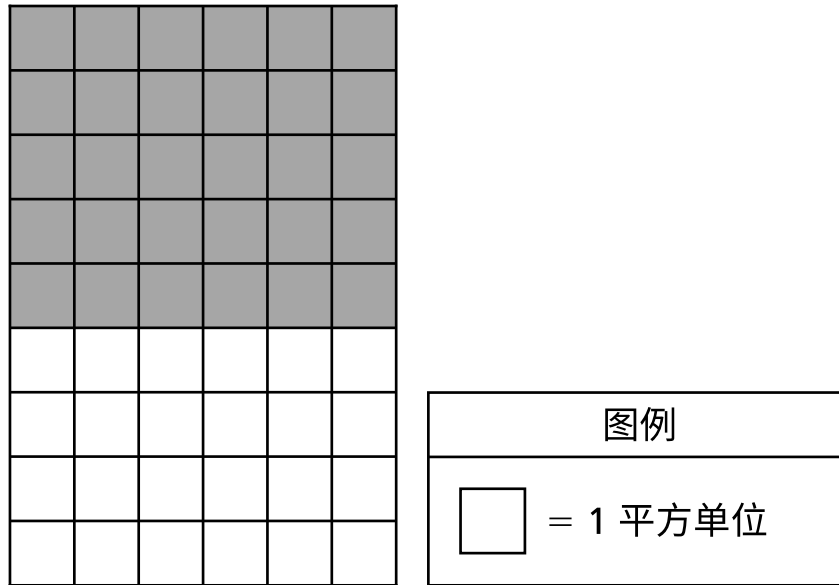
C $\frac{2}{4}$

D $\frac{2}{6}$

继续

30

一个有阴影的数组和一个无阴影的数组结合在一起，形成下图所示的图片。



可使用哪个表达式来确定整张图片的总面积，单位为平方单位？

- A $(5 \times 6) + (4 \times 6)$
- B $6 + 5 + 4$
- C $(5 \times 6) \times (4 \times 6)$
- D $6 \times 5 \times 4$

继续

31 这道题值1个学分。
72里面共有多少组9？

答案 _____

继续

32

这道题值1个学分。

一个圆被切成8个大小相等的部分。哪个分数表示这个圆的每个部分？

答案 圆的_____

继续

33

这道题值1个学分。

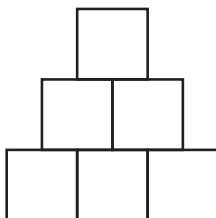
一个正方形的边长为3英尺。该正方形的面积是多少平方英尺？

答案 _____ 平方英尺

继续

34 这道题值 2 个学分。

下图所示的图形是由相等的部分组成的。



哪个分数表示该整张图的每个部分？

解释你如何知道你的答案是正确的。

继续

35

这道题值 2 个学分。

以下显示了一个数字模式的开头。

6, 10, 14, 18, ...

该模式继续。该模式中的第10个数字是偶数还是奇数？请务必在你的答案中包括用于该模式的规则。

解释你如何知道你的答案是正确的。

继续

36

这道题值 2 个学分。

约翰在下午5:20开始读一本书，他读了45分钟，然后玩了30分钟的游戏。约翰是在什么时候停止玩电子游戏的？

写出你的演算过程。

答案 下午_____

继续

37 这道题值 2 个学分。

下面列出了四个数字。



用所示的每个数字写出一个百位上有数字3的四位数。然后用你所知道的关于位值的知识来确定你所写的数字中每个数字的位值。

解释你如何知道你的答案是正确的。

38 这道题值 3 个学分。

桑德拉吃了一块披萨的 $\frac{2}{6}$ ，乔治吃了同一块披萨的 $\frac{3}{6}$ 。桑德拉说她吃的披萨比乔治多。

乔治说他吃的披萨比桑德拉多。谁是正确的？请确保在你的答案中包括一个正确的比较语句，使用 $>$ 、 $<$ 或 $=$ ，以及你对分数或整体的一部分的理解。

解释你的答案。

停止

3年级

2023

数学测试

第2部分

2023年5月2-4日

Grade 3

2023

Mathematics Test

Session 2

May 2-4, 2023

THE STATE EDUCATION DEPARTMENT
THE UNIVERSITY OF THE STATE OF NEW YORK / ALBANY, NY 12234
2023 Mathematics Tests Map to the Standards
Grade 3 Released Questions

Question	Type	Key	Points	Standard	Cluster	Secondary Standard(s)	Multiple Choice Questions	Constructed Response Questions	
							Percentage of Students Who Answered Correctly (P-Value)	Average Points Earned	P-Value (Average Points Earned ÷ Total Possible Points)
Session 1									
1	Multiple Choice	D	1	NGLS.Math.Content.NY-3.OA.4	Operations and Algebraic Thinking		0.8066		
2	Multiple Choice	D	1	NGLS.Math.Content.NY-3.MD.6	Measurement and Data		0.8740		
5	Multiple Choice	D	1	NGLS.Math.Content.NY-3.NF.3a	Number and Operations - Fractions	NGLS.Math.Content.NY-3.NF.2b	0.5314		
6	Multiple Choice	C	1	NGLS.Math.Content.NY-3.MD.2b	Measurement and Data		0.8468		
15	Multiple Choice	B	1	NGLS.Math.Content.NY-3.OA.9	Operations and Algebraic Thinking		0.3231		
16	Multiple Choice	B	1	NGLS.Math.Content.NY-3.NF.3c	Number and Operations - Fractions	NGLS.Math.Content.NY-3.NF.3b	0.7220		
18	Multiple Choice	C	1	NGLS.Math.Content.NY-3.MD.7d	Measurement and Data		0.4523		
19	Multiple Choice	B	1	NGLS.Math.Content.NY-3.OA.5	Operations and Algebraic Thinking		0.7618		
20	Multiple Choice	B	1	NGLS.Math.Content.NY-3.NF.2a	Number and Operations - Fractions		0.7512		
23	Multiple Choice	D	1	NGLS.Math.Content.NY-3.MD.5a	Measurement and Data	NGLS.Math.Content.NY-3.MD.5b	0.4650		
24	Multiple Choice	C	1	NGLS.Math.Content.NY-3.NF.2b	Number and Operations - Fractions		0.7734		
Session 2									
26	Multiple Choice	A	1	NGLS.Math.Content.NY-3.OA.8a	Operations and Algebraic Thinking		0.5181		
27	Multiple Choice	D	1	NGLS.Math.Content.NY-3.MD.5b	Measurement and Data	NGLS.Math.Content.NY-3.MD.7a	0.9002		
28	Multiple Choice	B	1	NGLS.Math.Content.NY-3.OA.3	Operations and Algebraic Thinking		0.5851		
29	Multiple Choice	A	1	NGLS.Math.Content.NY-3.NF.3b	Number and Operations - Fractions		0.4934		
30	Multiple Choice	A	1	NGLS.Math.Content.NY-3.MD.7c	Measurement and Data		0.6866		
31	Constructed Response		1	NGLS.Math.Content.NY-3.OA.2	Operations and Algebraic Thinking			0.6409	0.6409
32	Constructed Response		1	NGLS.Math.Content.NY-3.G.2	Geometry			0.6069	0.6069
33	Constructed Response		1	NGLS.Math.Content.NY-3.MD.7b	Measurement and Data	NGLS.Math.Content.NY-3.MD.5a		0.2747	0.2747
34	Constructed Response		2	NGLS.Math.Content.NY-3.G.2	Geometry			0.4023	0.2012
35	Constructed Response		2	NGLS.Math.Content.NY-3.OA.9	Operations and Algebraic Thinking			0.3749	0.1875
36	Constructed Response		2	NGLS.Math.Content.NY-3.MD.1	Measurement and Data			0.5320	0.2660
37	Constructed Response		2	NGLS.Math.Content.NY-3.NBT.4a	Number and Operations in Base Ten			0.3255	0.1628
38	Constructed Response		3	NGLS.Math.Content.NY-3.NF.3d	Number and Operations - Fractions			0.3579	0.1193

*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.