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 approximiately 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 (Traditional) Edition

Grade 3 2023

Mathematics Test

Session 1

May 2–4, 2023

紐約州測驗計劃
數學考試
第1卷

3年級

2023年5月2–4日

RELEASED QUESTIONS

第 1 卷

應考建議

以下建議可協助你充分發揮實力：

- 在作答之前，請仔細閱讀每一試題，好好思考後再作答。
- 本次考試提供一把尺子讓你使用。考試中如需要使用，可以使用尺子。

1 什麼因數可使以下方程成立？

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

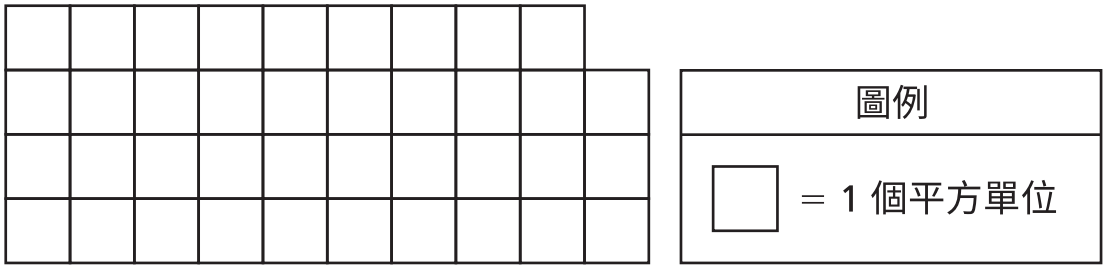
A 6

B 7

C 8

D 9

2 以下所示的圖由單位正方形組成。



這個圖的面積是多少平方單位？

A 23

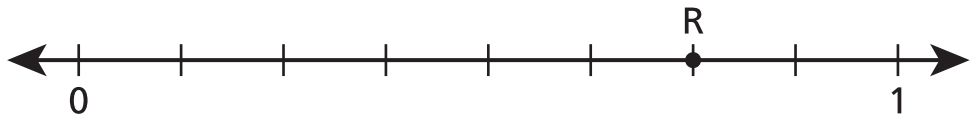
B 26

C 32

D 39

繼續

5 R點顯示在下面的數軸上。



哪兩個分數與R點所代表的數值相等？

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 瑪德琳的袋子裡正好有7枚硬幣。每枚硬幣的品質為5克。瑪德琳的袋子裡所有硬幣的總品質是多少克？

A 2

B 12

C 35

D 40

繼續

15 一個規則被用來建立如下所示的數字模式。

__?__, 9, __?__, 21, 27

模式中遺失哪兩個數字？

A 3 和 12

B 3 和 15

C 6 和 12

D 6 和 15

16 哪個分數等於$\frac{4}{4}$？

A $\frac{2}{1}$

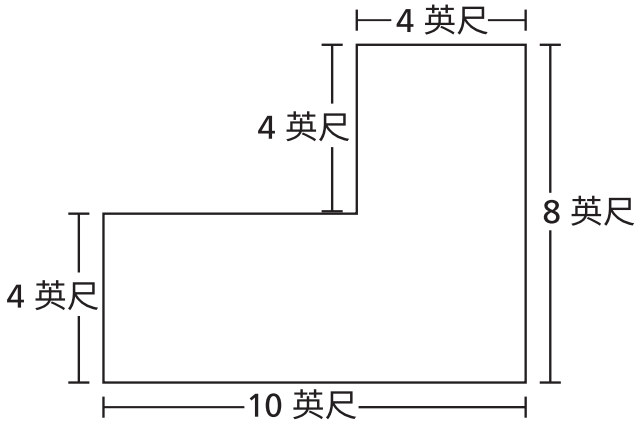
B $\frac{2}{2}$

C $\frac{4}{1}$

D $\frac{4}{2}$

繼續

18 下圖所示的形狀是由兩個矩形組合而成的。



該形狀的面積是多少平方英尺？

A 36

B 40

C 56

D 80

19 哪個表達式相當於$4 \times (3 \times 2)$？

A $2 + (3 + 4)$

B $3 \times (4 \times 2)$

C $2 \times (4 + 3)$

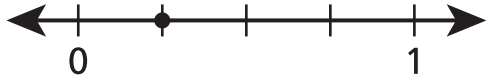
D $3 + (2 \times 4)$

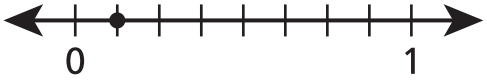
繼續

20 哪條數軸顯示了位於$\frac{1}{4}$的點？

A 

C 

B 

D 

23 需要多少個單位正方形来構成一個面積為48平方單位的矩形？

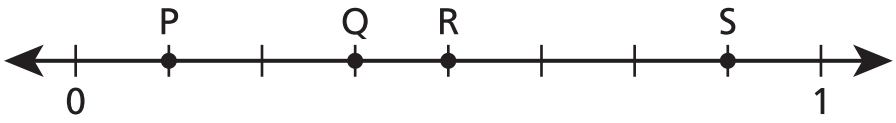
A 6

B 8

C 24

D 48

24 下圖中數軸上的哪一點代表分數$\frac{4}{8}$？



A 點 P

B 點 Q

C 點 R

D 點 S

停止作答

3年級
2023
數學測驗
第 1 卷
2023年5月2–4日

Grade 3
2023
Mathematics Test
Session 1
May 2–4, 2023

姓名：_____

Chinese (Traditional) Edition

Grade 3 2023

Mathematics Test

Session 2

May 2–4, 2023

紐約州測驗計劃
數學考試
第2卷

3年級

2023年5月2–4日

RELEASED QUESTIONS

第 2 卷

應考建議

以下建議可協助你充分發揮實力：

- 在作出選擇或寫下答案之前，請仔細閱讀每一試題，好好思考後再作答。
- 本次考試提供一把尺子讓你使用。考試中如需要使用，可以使用尺子。
- 如果有相關要求，請寫出你的計算過程。

26 一名學生的盒子裡有27個紙杯蛋糕。其中有10個帶巧克力糖霜的紙杯蛋糕和11個帶香草糖霜的紙杯蛋糕。其餘的紙杯蛋糕s有草莓糖霜。s的值是多少？

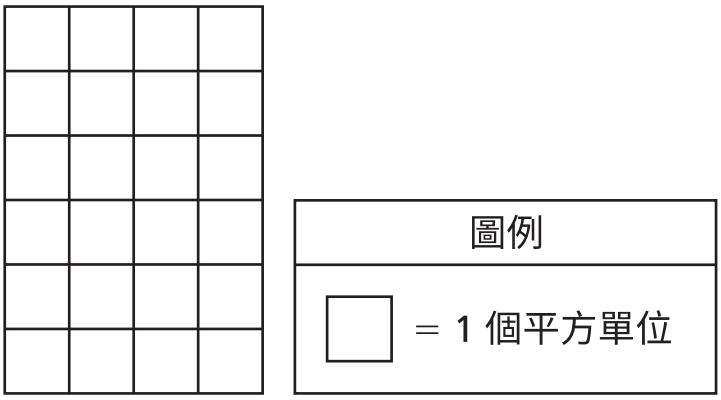
A 6

B 8

C 17

D 21

27 下圖所示的矩形的面積可以透過使用單位正方形求出。



請問矩形的總面積是多少個平方單位？

A 10

B 18

C 20

D 24

繼續

28 華雷斯先生買了5包筆記本。每包有6本筆記本。他給他的3個孩子各發了同等數量的筆記本。每個孩子能得到多少本筆記本？

A 8

B 10

C 11

D 14

29 哪個分數等於$\frac{2}{8}$？

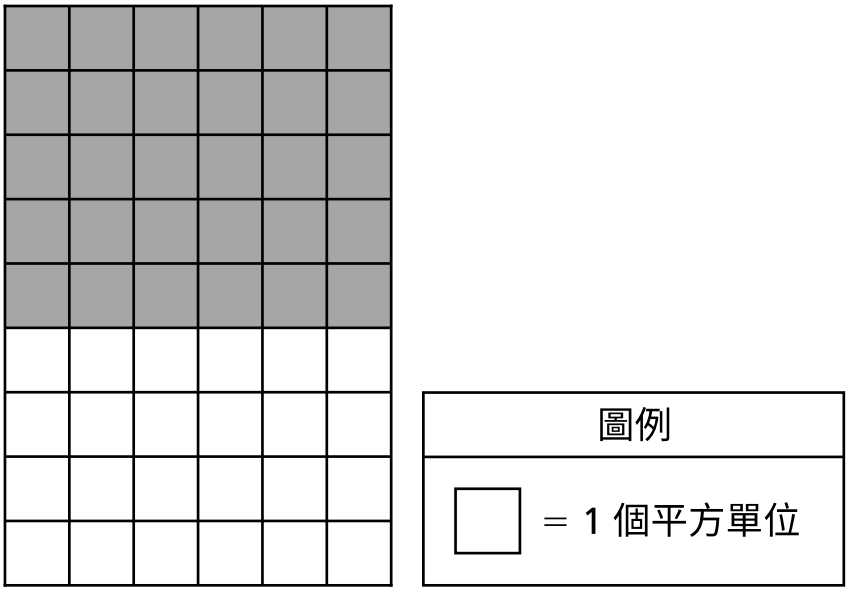
A $\frac{1}{4}$

B $\frac{1}{6}$

C $\frac{2}{4}$

D $\frac{2}{6}$

30 一個有陰影的陣列和一個無陰影的陣列結合在一起，形成下圖所示的圖片。



可使用哪個表達式來確定整張圖片的總面積，單位為平方單位？

A $(5 \times 6) + (4 \times 6)$

B $6 + 5 + 4$

C $(5 \times 6) \times (4 \times 6)$

D $6 \times 5 \times 4$

繼續

31 **答對這道題可獲得1個積分。**

72裡面共有多少組9 ？

答案 _____

32 **答對這道題可獲得1個積分。**

一個圓被切成8個大小相等的部分。每個部分是圓形的幾分之幾？

答案 圓的 _____

繼續

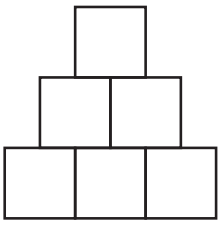
33 **答對這道題可獲得1個積分。**

一個正方形的邊長為3英尺。該正方形的面積是多少平方英尺？

答案 _____ 平方英尺

34 **答對這道題可獲得2個積分。**

下圖所示的圖形是由相等的部分組成的。



哪個分數表示該整張圖的每個部分？

請解釋你如何確認你的答案正確。

35 **答對這道題可獲得2個積分。**

以下顯示了一個數字模式的開頭。

6, 10, 14, 18, . . .

該模式繼續。該模式中的第10個數字是偶數還是奇數？請務必在你的答案中包括用於該模式的規則。

請解釋你如何確認你的答案正確。

36 **答對這道題可獲得2個積分。**

約翰在下午5:20開始讀一本書，他讀了45分鐘，然後玩了30分鐘的電子遊戲。約翰是在什麼時候停止玩電子遊戲的？

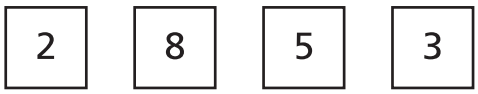
請寫出你的計算過程。

答案 下午 _____

繼續

37 **答對這道題可獲得2個積分。**

下面列出了四個數字。



用所示的每個數字寫出一個百位上有數字3的四位數。然後用你所知道的關於位值的知識來確定你所寫的數字中每個數字的位值。

請解釋你如何確認你的答案正確。

38 **答對這道題可獲得3個積分。**

桑德拉吃了一塊披薩的$\frac{2}{6}$，喬治吃了同一塊披薩的$\frac{3}{6}$。桑德拉說她吃的披薩比喬治多。喬治說他吃的披薩比桑德拉多。誰是正確的？請確保在你的答案中包括一個正確的比較語句，使用>、<或=，以及你對分數或整體的一部分的理解。

請解釋你的答案。

停止作答

3年級
2023
數學測驗
第 2 卷
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.