



Our Students. Their Moment.

**New York State Testing Program
Grade 5
Mathematics Test**

Released Questions

June 2019

New York State administered the Mathematics Tests in May 2019 and is now 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 2019 Exams

Background

In 2013, New York State began administering tests designed to assess student performance in accordance with the instructional shifts and rigor demanded by the new New York State P-12 Learning Standards in Mathematics. To help in this transition to new assessments, the New York State Education Department (SED) has been releasing an increasing number of test questions from the tests that were administered to students across the State in the spring. This year, SED is again releasing large portions of the 2019 NYS Grades 3-8 English Language Arts and Mathematics test materials for review, discussion, and use.

For 2019, included in these released materials are at least 75 percent of the test questions that appeared on the 2019 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 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.

Short-Response Questions

Short-response questions require students to complete tasks and show their work. Like multiple-choice questions, short-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 of the standards.

Extended-Response Questions

Extended-response questions ask students to show their work in completing two or more tasks or a more extensive problem. Extended-response questions allow students to show their understanding of mathematical procedures, conceptual understanding, and application. Extended-response questions may also assess student reasoning and the ability to critique the arguments of others.

The scoring rubric for short and extended constructed-response questions can be found in the grade-level Educator Guides at <https://www.engageny.org/resource/test-guides-english-language-arts-and-mathematics>.

New York State P-12 Learning Standards Alignment

The alignment(s) to the New York State P-12 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-point and three-point 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 future valid and reliable tests, some content must remain secure for possible use on future exams. As such, 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 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. Specific criteria for writing test questions, as well as additional assessment information, are available at <http://www.engageny.org/common-core-assessments>.

姓名：_____



Chinese Edition
Grade 5 2019
Mathematics Test
Session 1
May 1–3, 2019

紐約州考試計劃 數學考試 第 1 卷

5 年級

2019 年 5 月 1 至 3 日

RELEASED QUESTIONS

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5年級數學參考資料

換算

1英里 = 5,280英尺	1磅 = 16盎司	1杯 = 8液盎司
1英里 = 1,760碼	1噸 = 2,000磅	1品脫 = 2杯
		1夸脫 = 2品脫
		1加侖 = 4夸脫
		1升 = 1,000立方釐米

公式

長方體	$V = Bh$ 或 $V = lwh$
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第 1 卷



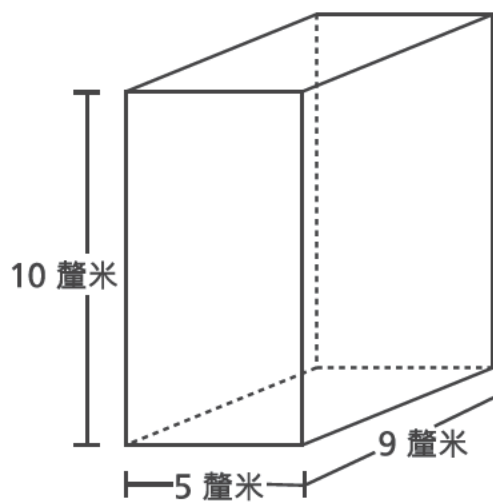
考試建議

以下建議可協助你獲得好成績：

- 在作出選擇之前，請仔細閱讀每一試題，好好思考後再作答。
- 本次考試提供數學工具（一把尺子和一個量角器）和一張參考資料讓你使用。你可以自行決定使用各個工具和參考資料的時機。考試當中只要你覺得使用數學工具和參考資料能協助你解答就可以使用。

1

禮品盒呈矩形棱柱形，如下圖所示。



禮品盒的體積是多少立方釐米？

- A 24
- B 45
- C 225
- D 450

2

$\frac{2}{10} + \frac{6}{100}$ 的和是多少？

- A $\frac{8}{10}$
- B $\frac{8}{100}$
- C $\frac{26}{10}$
- D $\frac{26}{100}$

繼續

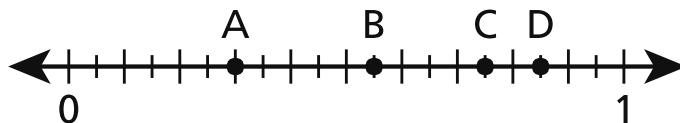
3

星期六，馬克賣了 $2\frac{7}{8}$ 加侖檸檬水。在同一天，雷根的銷售量是馬克的 $\frac{2}{3}$ 。雷根賣出了多少加侖檸檬水？

- A $1\frac{5}{16}$
- B $1\frac{11}{12}$
- C $2\frac{7}{12}$
- D $4\frac{5}{16}$

4

下面數軸上的哪一點代表值 0.75？

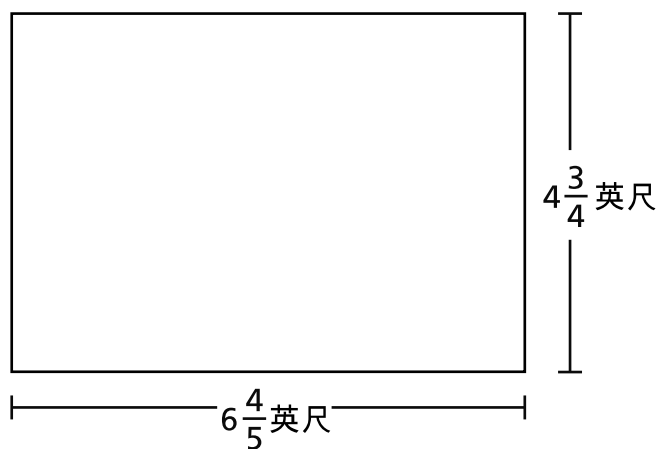


- A 點 A
- B 點 B
- C 點 C
- D 點 D

繼續

13

下圖所示矩形的面積是多少平方英尺？

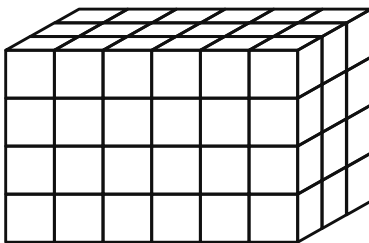


- A $11\frac{11}{20}$
- B $24\frac{12}{20}$
- C $27\frac{4}{20}$
- D $32\frac{6}{20}$

繼續

18

哪個表達式不能用於確定下圖所示的矩形棱柱的體積？



- A 12×6
- B 18×4
- C $6 \times 3 \times 4$
- D $6 \times 4 \times 6$

19

15.74 四捨五入到最接近的整數是多少？

- A 10
- B 15
- C 16
- D 20

繼續

20

傑克在每次填充時都會將 $\frac{1}{3}$ 磅鳥食放入他的餵鳥器中。傑克用 4 磅鳥食可填充他的餵鳥器多少次？

- A $1\frac{1}{3}$
- B $3\frac{2}{3}$
- C 11
- D 12

21

卡洛斯使用堅果、葡萄乾和麥片製作 1 磅零食拼盤。下面的清單顯示了他使用的堅果和葡萄乾的重量。

- $\frac{1}{3}$ 磅堅果
- $\frac{2}{5}$ 磅葡萄乾

卡洛斯用了多少磅麥片？

- A $\frac{3}{8}$
- B $\frac{5}{8}$
- C $\frac{4}{15}$
- D $\frac{11}{15}$

繼續

26 請問表達式 $\frac{1}{7} \div 5$ 的值是多少？

A $\frac{1}{12}$

B $\frac{1}{35}$

C $\frac{5}{7}$

D $\frac{6}{7}$

27 科爾有一個長方形的花園，面積為 **16.02** 平方米。花園的長度為 **4.5** 米。請問花園的寬度是多少米？

A 3.56

B 11.52

C 16.12

D 20.52

28 學校共籌集了 **\$1,648** 購買新書。籌集的金錢將在 **8** 個不同的教室中平分。請問每間教室將獲得的總金額是多少？

A \$206

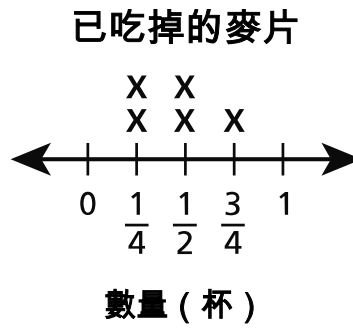
B \$207

C \$260

D \$270

繼續

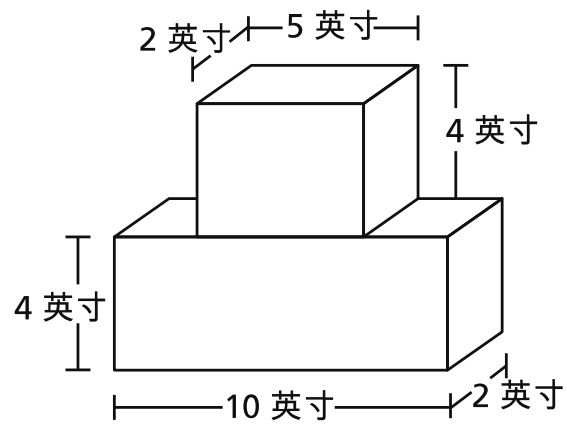
下面的分佈點線圖顯示莎安 5 天內所吃麥片的數量。



莎安在這 5 天所吃的麥片總共是多少杯？

- A $1\frac{1}{2}$
- B $1\frac{3}{4}$
- C $1\frac{4}{6}$
- D $2\frac{1}{4}$

拉娜使用圖中所示的兩個方塊來建造一座塔樓。



拉娜的塔樓

拉娜建造的塔樓總體積是多少立方英寸？

- A 27
- B 80
- C 116
- D 120

停止作答

5 年級

2019

數學考試

第 1 卷

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2019

Mathematics Test

Session 1

May 1–3, 2019

姓名：_____



Chinese Edition
Grade 5 2019
Mathematics Test
Session 2
May 1–3, 2019

紐約州考試計劃 數學考試 第 2 卷

5 年級

2019 年 5 月 1 至 3 日

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1夸脫 = 2品脫

1加侖 = 4夸脫

1升 = 1,000立方釐米

公式

長方體

$$V = Bh \text{ 或 } V = lwh$$

第 2 卷



考試建議

以下建議可協助你獲得好成績：

- 在作出選擇或回答問題之前，請仔細閱讀每一試題，好好思考後再作答。
- 本次考試提供數學工具（一把尺子和一個量角器）和一張參考資料讓你使用。你可以自行決定使用各個工具和參考資料的時機。考試當中只要你覺得使用數學工具和參考資料能協助你解答就可以使用。
- 如果有相關要求，請寫出你的計算過程。

31

在下面這些關於矩形和菱形的陳述中，哪個陳述總是正確的？

- A 這兩種圖都是正方形。
- B 這兩種圖都是四邊形。
- C 這兩種圖形都有四個直角。
- D 這兩種圖形都有四條全等的邊。

32

請問表達式 $\frac{2}{5} + \frac{3}{7}$ 的值是多少？

- A $\frac{5}{35}$
- B $\frac{6}{35}$
- C $\frac{5}{12}$
- D $\frac{29}{35}$

33

哪個測量結果等於 4,000 釐米？

- A 4 米
- B 40 米
- C 400 米
- D 40,000 米

繼續

34

薩伊正在製作燕麥棒。對於每批燕麥棒，其配方需要 $1\frac{2}{3}$ 杯燕麥片和 $\frac{1}{2}$ 杯裝葡萄乾。在一批燕麥棒中總共需要使用多少杯燕麥片和葡萄乾？

- A $1\frac{1}{5}$
- B $1\frac{3}{5}$
- C $2\frac{1}{3}$
- D $2\frac{1}{6}$

35

在科學課上，保拉透過將 2.05 毫升過氧化氫和 6.15 毫升水加在一起製成混合物。將等量的全部混合物倒入 5 個空容器中。她將多少毫升的混合物倒入了每個容器中？

- A 0.61
- B 1.64
- C 3.2
- D 13.4

36

以下哪一個是數 482.073 的文字表達形式？

- A 四八十二點零七三
- B 四十八萬兩千七十三
- C 四百八十二點七三
- D 四百八十二點零七三

繼續

37

馬可為他的班級烤餅乾。他在每批餅乾中使用 $\frac{3}{4}$ 杯黃油，並烘烤 $2\frac{1}{2}$ 批。哪個方程式可用於確定馬可烘烤餅乾所使用的黃油杯數？

A $\frac{5}{2} \times \frac{3}{4} = 1\frac{7}{8}$

B $\frac{3}{2} \times \frac{3}{4} = 1\frac{1}{8}$

C $\frac{5}{2} \times \frac{4}{3} = 3\frac{1}{3}$

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

38

哪個表達式不相當於 $\frac{2}{3} \times 4$ ？

A $(2 \times 4) \div 3$

B $\frac{1}{3} \times (2 \times 4)$

C $\left(4 \times \frac{1}{3}\right) \times 2$

D $\left(2 \times \frac{1}{3}\right) + \left(4 \times \frac{1}{3}\right)$

繼續

39

馬丁正在使用單位立方體來建造一個矩形棱柱形狀的塔。塔的描述如下。

- 底層由 16 個單位立方體組成
- 底層的形狀是方形棱柱
- 在底層的頂部新增了 9 層相同的單位立方體層

完成後塔的總體積是多少立方單位？

請寫出你的計算過程。

答案 _____ 個立方單位

繼續

喬爾的目標是每週練習單簧管 $4\frac{1}{2}$ 小時。下面的清單顯示了喬爾本週迄今為止已練習的小時數。

- 星期一： $1\frac{1}{2}$ 小時
- 星期三： $1\frac{1}{4}$ 小時
- 星期四： 1 小時

請問喬爾本週還需要練習多少小時才能達到他的目標？

請寫出你的計算過程。

答案 _____ 小時

繼續

41

如何將數 32,000 中的數字 2 的值與數 26,000 中的數字 2 的值進行比較？

請解釋你的答案。

繼續

42

容器中有 5 杯燕麥片。斯特拉每天早餐吃 $\frac{1}{3}$ 杯燕麥片。請問斯特拉將在幾天後吃完容器中所有的燕麥片？

請寫出你的計算過程。

答案 _____ 天

繼續

43

奧爾加用緞帶裝飾毯子。她有 12 碼緞帶。她用 22 英尺緞帶裝飾毛毯。裝飾毯子後，還剩下多少英尺緞帶？

請寫出你的計算過程。

答案 _____ 英尺

44 在表達式 $5 \times \frac{y}{7}$ 中， y 等於什麼值時會使乘積大於 5？

請解釋你的答案。

繼續

黛安用披薩麵團製作比薩。她將麵團分成以下三個部分。

- A 部分為 8.25 盎司。
- B 部分是 A 部分的兩倍。
- C 部分是 B 部分的兩倍。

請問 B 部分和 C 部分的重量分別是多少盎司？

請寫出你的計算過程。

答案 B 部分 _____ 盎司

C 部分 _____ 盎司

停止作答

5 年級

2019

數學考試

第 2 卷

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Grade 5

2019

Mathematics Test

Session 2

May 1–3, 2019

THE STATE EDUCATION DEPARTMENT
THE UNIVERSITY OF THE STATE OF NEW YORK / ALBANY, NY 12234
2019 Mathematics Tests Map to the Standards
Grade 5 Released Questions on EngageNY

Question	Type	Key	Points	Standard	Cluster	Subscore
Session 1						
1	Multiple Choice	D	1	CCSS.Math.Content.5.MD.C.5b	Measurement and Data	Measurement and Data
2	Multiple Choice	D	1	CCSS.Math.Content.4.NF.C.5	Number and Operations - Fractions	Number and Operations - Fractions
3	Multiple Choice	B	1	CCSS.Math.Content.5.NF.B.6	Number and Operations - Fractions	Number and Operations - Fractions
4	Multiple Choice	C	1	CCSS.Math.Content.4.NF.C.6	Number and Operations in Base Ten	Number and Operations in Base Ten
13	Multiple Choice	D	1	CCSS.Math.Content.5.NF.B.4b	Number and Operations - Fractions	Number and Operations - Fractions
18	Multiple Choice	D	1	CCSS.Math.Content.5.MD.C.5a	Measurement and Data	Measurement and Data
19	Multiple Choice	C	1	CCSS.Math.Content.5.NBT.A.4	Number and Operations in Base Ten	Number and Operations in Base Ten
20	Multiple Choice	D	1	CCSS.Math.Content.5.NF.B.7c	Number and Operations - Fractions	Number and Operations - Fractions
21	Multiple Choice	C	1	CCSS.Math.Content.5.NF.A.2	Number and Operations - Fractions	Number and Operations - Fractions
26	Multiple Choice	B	1	CCSS.Math.Content.5.NF.B.7a	Number and Operations - Fractions	Number and Operations - Fractions
27	Multiple Choice	A	1	CCSS.Math.Content.5.NBT.B.7	Number and Operations in Base Ten	Number and Operations in Base Ten
28	Multiple Choice	A	1	CCSS.Math.Content.5.NBT.B.6	Number and Operations in Base Ten	Number and Operations in Base Ten
29	Multiple Choice	D	1	CCSS.Math.Content.5.MD.B.2	Measurement and Data	Measurement and Data
30	Multiple Choice	D	1	CCSS.Math.Content.5.MD.C.5c	Measurement and Data	Measurement and Data
Session 2						
31	Multiple Choice	B	1	CCSS.Math.Content.5.G.B.3	Geometry	
32	Multiple Choice	D	1	CCSS.Math.Content.5.NF.A.1	Number and Operations - Fractions	Number and Operations - Fractions
33	Multiple Choice	B	1	CCSS.Math.Content.4.MD.A.1	Measurement and Data	Measurement and Data
34	Multiple Choice	D	1	CCSS.Math.Content.5.NF.A.1	Number and Operations - Fractions	Number and Operations - Fractions
35	Multiple Choice	B	1	CCSS.Math.Content.5.NBT.B.7	Number and Operations in Base Ten	Number and Operations in Base Ten
36	Multiple Choice	D	1	CCSS.Math.Content.5.NBT.A.3a	Number and Operations in Base Ten	Number and Operations in Base Ten
37	Multiple Choice	A	1	CCSS.Math.Content.5.NF.B.6	Number and Operations - Fractions	Number and Operations - Fractions
38	Multiple Choice	D	1	CCSS.Math.Content.5.NF.B.4a	Number and Operations - Fractions	Number and Operations - Fractions
39	Constructed Response		2	CCSS.Math.Content.5.MD.C.5c	Measurement and Data	Measurement and Data

40	Constructed Response		2	CCSS.Math.Content.5.NF.A.2	Number and Operations - Fractions	Number and Operations - Fractions
41	Constructed Response		2	CCSS.Math.Content.5.NBT.A.1	Number and Operations in Base Ten	Number and Operations in Base Ten
42	Constructed Response		2	CCSS.Math.Content.5.NF.B.7c	Number and Operations - Fractions	Number and Operations - Fractions
43	Constructed Response		2	CCSS.Math.Content.5.MD.A.1	Measurement and Data	Measurement and Data
44	Constructed Response		2	CCSS.Math.Content.5.NF.B.5b	Number and Operations - Fractions	Number and Operations - Fractions
45	Constructed Response		3	CCSS.Math.Content.5.NBT.B.7	Number and Operations in Base Ten	Number and Operations in Base Ten

*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.