engage^ny

Our Students. Their Moment.

New York State Testing Program
Grade 4
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-andmathematics.

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 4 2019
Mathematics Test
Session 1
May 1–3, 2019

紐約州考試計劃
數學考試
第 1 卷

4 年級

2019 年 5 月 1 至 3 日

RELEASED QUESTIONS

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，認真思考後再作答。
- 本次考試提供數學工具讓你使用（一把尺子和一個量角器）。你可以自行決定使用各個工具的時機。考試當中只要你覺得使用數學工具能協助你解答就可以使用。

1 塔圖姆每天放學後都會遛狗 $\frac{2}{3}$ 英里。她 5 天遛狗多少英里？

A $\frac{7}{3}$

B $\frac{10}{3}$

C $\frac{2}{15}$

D $\frac{10}{15}$

2 傑登在比賽中所獲得的分數小於 45，並且是 7 的倍數。請問傑登獲得了多少分？

A 17

B 35

C 52

D 70

3 請問哪個比較是正確的？

A $\frac{2}{3} = \frac{8}{12}$

B $\frac{4}{9} = \frac{8}{9}$

C $\frac{3}{4} > \frac{9}{10}$

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

繼續

4 棒球場分三個不同的觀看區。可以坐在每個觀看區的人數如下所述。

- 紅色觀看區可容納 200 人
- 藍色觀看區可容納的人數比紅色觀看區少 20 人
- 綠色觀看區可容納的人數是藍色觀看區的 2 倍

可以坐在棒球場的總人數是多少?

A 260

B 380

C 640

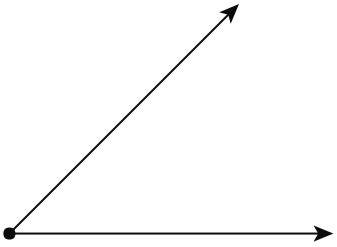
D 740

5 請問哪個圖是線段的範例?

A

C

B



D

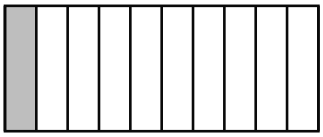
8 請問哪個分數模型的陰影區域相當於 $\frac{3}{12}$？

A

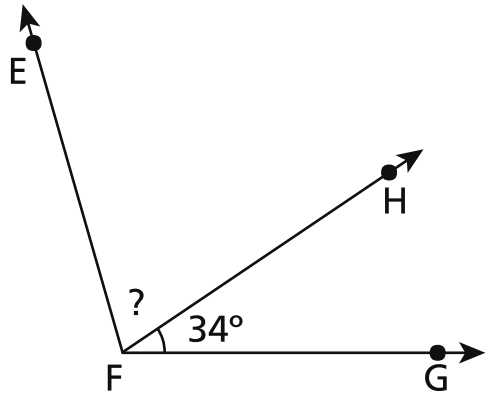
C

B

D



9 以下所示角 **EFG** 的測量值是 **106** 度。



請問角 **EFH** 是多少度？

A 34

B 56

C 72

D 140

15 請問以下表達式的值是多少？

$2{,}816 \times 7$

A 14,572

B 14,672

C 19,612

D 19,712

16 請問表達式 $2{,}314 \div 4$ 的商是多少？

A 508

B 508 r2

C 578

D 578 r2

17 教師購買下列資料夾。

- 5 盒紅色資料夾，每盒包含 36 個資料夾
- 6 盒藍色資料夾，每盒包含 32 個資料夾

請問哪個數字**最接近**教師購買的紅色和藍色資料夾的總數？

A 275

B 380

C 440

D 550

繼續

20 當四捨五入到最接近的百位時，哪兩個數字都四捨五入到 1,500？

A 1,399 和 1,599

B 1,449 和 1,549

C 1,457 和 1,547

D 1,489 和 1,589

21 富勒先生想在他長方形的院子裡建一個圍欄。院子的寬是 55 英尺，長是 75 英尺。富勒先生需要多少英尺圍欄？

A 130

B 260

C 3,905

D 4,125

繼續

27 下面三個模型都用陰影來表示不同的分數。

模型陰影部分所代表的分數之和是多少？

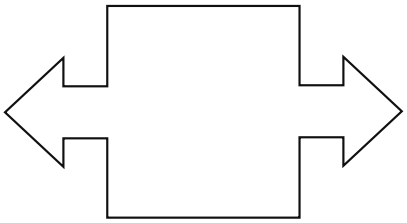
A $\frac{10}{18}$

B $\frac{8}{10}$

C $\frac{10}{8}$

D $\frac{10}{6}$

28 在下列所示的圖中最多可以畫多少條對稱線？



A 0

B 1

C 2

D 4

29 以度為單位，以下哪個值相當於一個圓的 $\frac{1}{360}$？

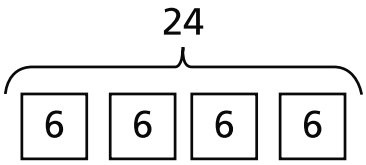
A 1

B 90

C 180

D 360

30 請問哪個比較語句描述了下面的模型？



A 6 是 4 的 24 倍

B 24 是 6 的 4 倍

C 24 的 4 倍是 6

D 6 的 6 倍是 24

停止作答

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紐約州考試計劃
數學考試
第 2 卷

4 年級

2019 年 5 月 1 至 3 日

RELEASED QUESTIONS

第 2 卷

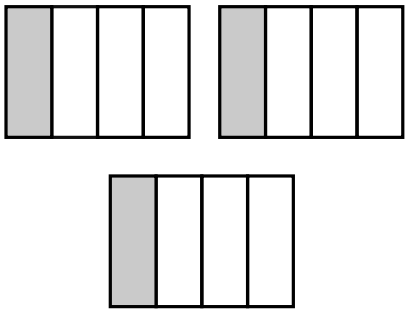
考試建議

以下建議可協助你獲得好成績：

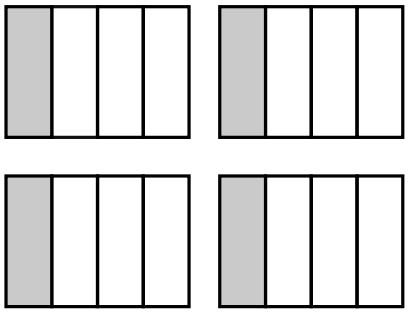
- 在作出選擇或回答問題之前，請仔細閱讀每一試題，好好思考後再作答。
- 本次考試提供數學工具讓你使用（一把尺子和一個量角器）。你可以自行決定使用各個工具的時機。考試當中只要你覺得使用數學工具能協助你解答就可以使用。
- 如果有相關要求，請寫出你的計算過程。

31 請問哪個圖中的陰影部分可以用來表示 $4 \times \frac{1}{3}$？

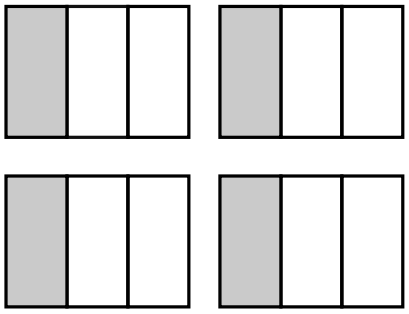
A



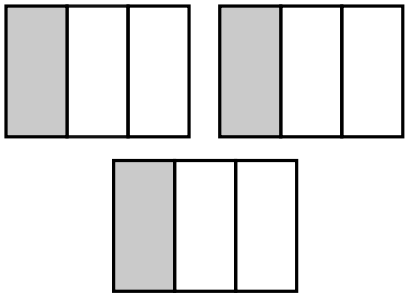
C



B



D



32 一輛卡車停在一棵樹旁。卡車的高度是 6 英尺。樹的高度 3 倍於卡車的高度。請問哪個方程可以用來計算出樹的高度？

A $6 + 3 = \_?\_$

B $6 \times 3 = \_?\_$

C $(6 \times 3) + 3 = \_?\_$

D $(6 \times 3) + 6 = \_?\_$

繼續

33 請問哪個表達式可以用來計算下面的方程式？

$4{,}600 \div 5 = \underline{\quad ? \quad}$

A $(46 \div 5) + (100 \div 5)$

B $(400 \div 5) - (600 \div 5)$

C $(4{,}000 \div 5) - (60 \div 5)$

D $(4{,}000 \div 5) + (600 \div 5)$

34 關於一個物體圍繞一個圓圈轉了 90 度的哪一個陳述是正確的？

A 它圍繞一個圓圈轉了 $\frac{1}{4}$。

B 它圍繞一個圓圈轉了 $\frac{2}{4}$。

C 它圍繞一個圓圈轉了 $\frac{3}{4}$。

D 它圍繞一個圓圈轉了 $\frac{4}{4}$。

35 請問哪個陳述描述的是以下**數**字**句**型？

$8 = 4 \times 2$

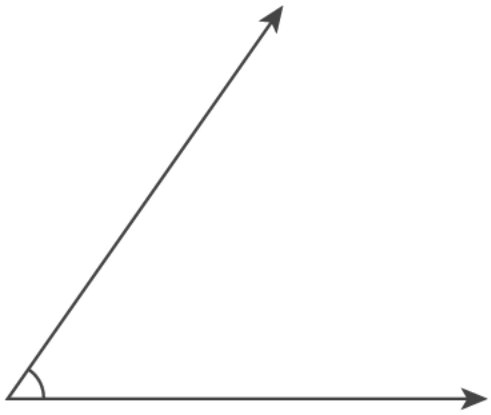
A 4 是以下數字的 8 倍：2

B 4 是以下數字的 2 倍：8

C 8 是以下數字的 2 倍：2

D 8 是以下數字的 4 倍：2

36 以下所示的角是多少度？



A 55

B 65

C 125

D 135

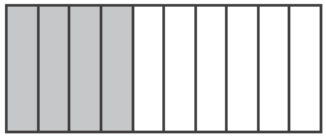
37 以下模型中的一部分被塗暗用來代表一個分數。

請問哪個分數模型用陰影表示等效分數？

A 

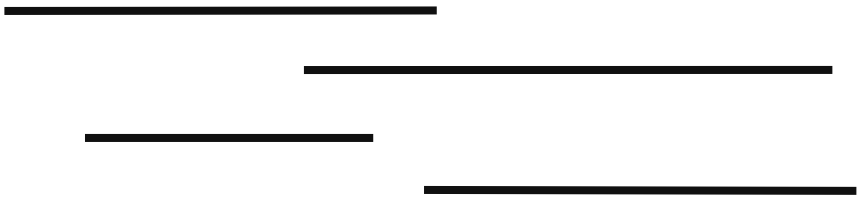
C 

B 

D 

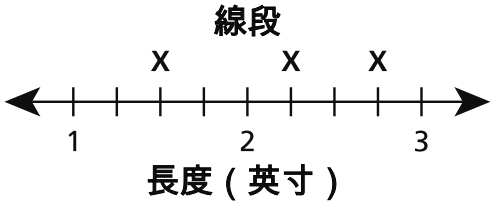
繼續

38 下圖顯示了不同長度的線段，以英寸為單位。

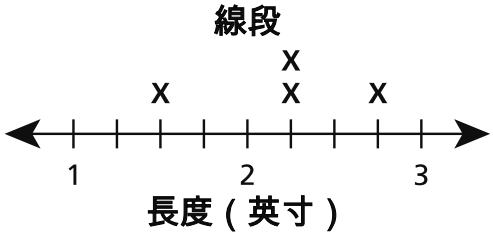


測量每個線段。請問哪個分佈點線圖正確顯示了線段的長度？

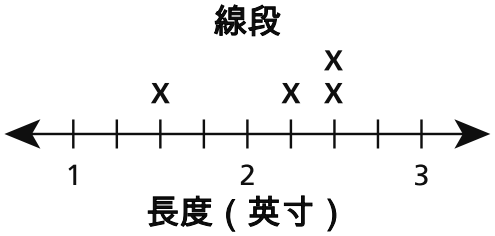
A



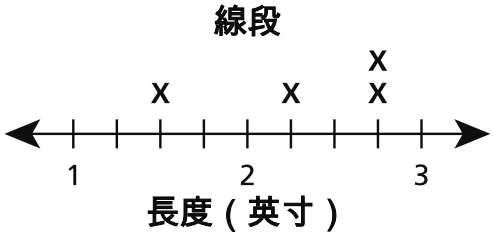
C



B



D



39 下面圖中的陰影部分代表吉爾吃的糖果棒的一部分。

湯姆有同樣大小的糖果棒。他吃掉的糖果棒的量是吉爾所吃掉糖果棒的 2 倍。湯姆吃了糖果棒的幾分之幾？

請寫出你的計算過程。

答案 _____ 糖果棒

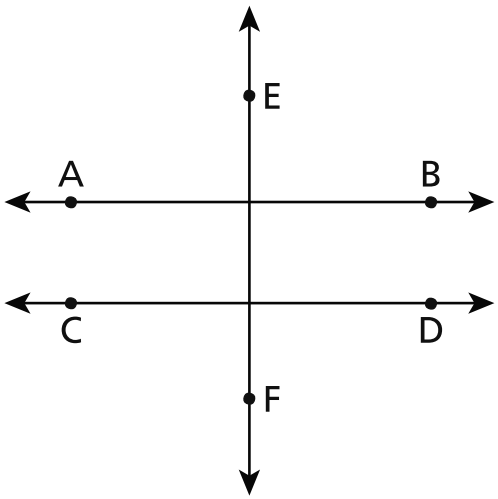
繼續

40 使用下面顯示的每個數字創建一個具有最大值的 5 位數和一個具有最小值的 5 位數。每個數字在每個數中只能使用一次。然後使用 >, <, 或 = 寫一個數字句型來比較你創建的兩個數。

2, 9, 1, 3, 8

請寫出你的計算過程。

41 下圖顯示了線 AB、線 CD 和線 EF。



識別圖上看起來彼此垂直的兩條線。

請解釋你是怎樣確定自己的答案的。

繼續

42 米克和傑基買了一個大三明治分享。他們每個人吃了該三明治的 $\frac{2}{5}$。

還剩下多少三明治？

請寫出你的計算過程。

答案 _____ 三明治

43 數字 3（在數 63,297 中）的值與數字 3（在數 60,325中）的值 相比如何？請務必在答案中包含你對位值的理解。

請解釋你的答案。

44 彼得森女士想要更換廚房裡的所有地磚。廚房地板長 12 英尺，寬 7 英尺。如果彼得森女士有 45 塊一英尺方形地磚，她還需要多少塊一英尺方形地磚才能完全鋪滿廚房地板？

請寫出你的計算過程。

答案 _____ 塊額外地磚

45 山 P 的高度是 1,086 英尺。山 Q 的高度 4 倍於山 P。下面的面積模型是計算山 Q 高度的一種方法。

	1,000	B	6
4	A	320	C

面積模型中 A、B 和 C 的缺失值是多少？

請寫出你的計算過程。

答案 A _____ , B _____ 以及 C _____

山 Q 的高度是多少英尺？

請寫出你的計算過程。

答案 _____ 英尺

停止作答

4 年級

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第 2 卷

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Grade 4

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 4 Released Questions on EngageNY

Question	Type	Key	Points	Standard	Cluster	Subscore
Session 1						
1	Multiple Choice	B	1	CCSS.Math.Content.4.NF.B.4c	Number and Operations - Fractions	Number and Operations - Fractions
2	Multiple Choice	B	1	CCSS.Math.Content.4.OA.B.4	Operations and Algebraic Thinking	Operations and Algebraic Thinking
3	Multiple Choice	A	1	CCSS.Math.Content.4.NF.A.2	Number and Operations - Fractions	Number and Operations - Fractions
4	Multiple Choice	D	1	CCSS.Math.Content.4.OA.A.2	Operations and Algebraic Thinking	Operations and Algebraic Thinking
5	Multiple Choice	A	1	CCSS.Math.Content.4.G.A.1	Geometry	
8	Multiple Choice	B	1	CCSS.Math.Content.4.NF.A.1	Number and Operations - Fractions	Number and Operations - Fractions
9	Multiple Choice	C	1	CCSS.Math.Content.4.MD.C.7	Measurement and Data	
15	Multiple Choice	D	1	CCSS.Math.Content.4.NBT.B.5	Number and Operations in Base Ten	Number and Operations in Base Ten
16	Multiple Choice	D	1	CCSS.Math.Content.4.NBT.B.6	Number and Operations in Base Ten	Number and Operations in Base Ten
17	Multiple Choice	B	1	CCSS.Math.Content.4.OA.A.3	Operations and Algebraic Thinking	Operations and Algebraic Thinking
20	Multiple Choice	C	1	CCSS.Math.Content.4.NBT.A.3	Number and Operations in Base Ten	Number and Operations in Base Ten
21	Multiple Choice	B	1	CCSS.Math.Content.4.MD.A.3	Measurement and Data	
27	Multiple Choice	D	1	CCSS.Math.Content.4.NF.B.3a	Number and Operations - Fractions	Number and Operations - Fractions
28	Multiple Choice	C	1	CCSS.Math.Content.4.G.A.3	Geometry	
29	Multiple Choice	A	1	CCSS.Math.Content.4.MD.C.5a	Measurement and Data	
30	Multiple Choice	B	1	CCSS.Math.Content.4.OA.A.1	Operations and Algebraic Thinking	Operations and Algebraic Thinking
Session 2						
31	Multiple Choice	B	1	CCSS.Math.Content.4.NF.B.4a	Number and Operations - Fractions	Number and Operations - Fractions
32	Multiple Choice	B	1	CCSS.Math.Content.4.OA.A.2	Operations and Algebraic Thinking	Operations and Algebraic Thinking
33	Multiple Choice	D	1	CCSS.Math.Content.4.NBT.B.6	Number and Operations in Base Ten	Number and Operations in Base Ten
34	Multiple Choice	A	1	CCSS.Math.Content.4.MD.C.5b	Measurement and Data	
35	Multiple Choice	D	1	CCSS.Math.Content.4.OA.A.1	Operations and Algebraic Thinking	Operations and Algebraic Thinking
36	Multiple Choice	A	1	CCSS.Math.Content.4.MD.C.6	Measurement and Data	
37	Multiple Choice	D	1	CCSS.Math.Content.4.NF.A.1	Number and Operations - Fractions	Number and Operations - Fractions
38	Multiple Choice	C	1	CCSS.Math.Content.3.MD.B.4	Measurement and Data	

39	Constructed Response		2	CCSS.Math.Content.4.NF.B.4b	Number and Operations - Fractions	Number and Operations - Fractions
40	Constructed Response		2	CCSS.Math.Content.4.NBT.A.2	Number and Operations in Base Ten	Number and Operations in Base Ten
41	Constructed Response		2	CCSS.Math.Content.4.G.A.2	Geometry	
42	Constructed Response		2	CCSS.Math.Content.4.NF.B.3d	Number and Operations - Fractions	Number and Operations - Fractions
43	Constructed Response		2	CCSS.Math.Content.4.NBT.A.1	Number and Operations in Base Ten	Number and Operations in Base Ten
44	Constructed Response		2	CCSS.Math.Content.4.MD.A.3	Measurement and Data	
45	Constructed Response		3	CCSS.Math.Content.4.NBT.B.5	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.