

Our Students. Their Moment.

New York State Testing Program Grade 4 Common Core Mathematics Test (Chinese)

Released Questions

June 2018

New York State administered the Mathematics Tests in May 2018 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 2018 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 2018 NYS Grades 3-8 English Language Arts and Mathematics test materials for review, discussion, and use.

For 2018, included in these released materials are at least 75 percent of the test questions that appeared on the 2018 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 <u>https://www.engageny.org/resource/test-guides-english-language-arts-and-mathematics</u>.

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 2018 Mathematics Test Session 1 May 1–3, 2018

紐約州考試計劃 數學考試 第1卷

2018年5月1至3日

Released Questions

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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,認真思考後再作答。
- 本次考試提供數學工具(一把尺子和一個量角器)供你使用。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。

簡投擲壘球的距離是9英尺。李投擲壘球的距離是簡的3倍。請問以下哪個方程式可用 來計算李投擲壘球的距離 d?

 $\mathbf{A} \quad d \times 3 = 9$

1

- **B** d + 3 = 9
- **C** 3 + 9 = d
- **D** $3 \times 9 = d$

2 娜塔莎和伊凡兩人都在寫一篇 5 頁的論文。娜塔莎在上午寫完了論文的 3/5, 並在下午寫 完了論文的 2/5。伊凡在放學後寫完了論文的 4/5。請問娜塔莎完成論文的進度比伊凡 多多少?

 $A \quad \frac{1}{5}$ $B \quad \frac{2}{5}$ $C \quad \frac{4}{5}$ $D \quad \frac{9}{5}$

繼續

- **3** 一個數字在四捨五入到最接近的千位時為 **47,000**。請問下面哪個數字可能是四捨五入前的數字?
 - **A** 46,295
 - **B** 46,504
 - **C** 47,520
 - **D** 47,924

4

以下玩具車的長度是多少英寸?



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

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

繼續 第3頁

- **12** 如果一個角在圓形中佔 $\frac{50}{360}$,請問這個角是多少度?
 - **A** 50°
 - **B** 90°
 - **C** 310°
 - **D** 360°

13 拉森女士要購買 2 輛廂式送貨車來經營業務。第一輛貨車的價格如下所示。

\$16,257

第二輛貨車價格中的數字 2 是第一輛貨車價格中數字 2 的 10 倍。請問下面哪個金額可能 是第二輛貨車的價格?

第1卷

- **A** \$12,987
- **B** \$15,927
- **C** \$17,257
- **D** \$21,579
- 14 請問以下數字排列的規律是什麼?

41, 38, 35, 32, 29, . . .

- A 除以3
- B 除以4
- C 減去3
- D 減去4



- **A** 60°
- **B** 70°
- **C** 110°
- **D** 120°

18 以下哪個表達式的值等於 <u>7</u> ?

$$A \quad \frac{2}{12} + \frac{3}{12} + \frac{3}{12}$$
$$B \quad \frac{7}{12} + \frac{7}{12} + \frac{7}{12}$$
$$C \quad \frac{2}{12} + \frac{1}{12} + \frac{2}{12} + \frac{1}{12}$$
$$D \quad \frac{2}{12} + \frac{1}{12} + \frac{2}{12} + \frac{2}{12}$$

繼續 第9頁

23 請問 1,248÷7 的商是多少?

- A 177, 餘數 9
- **B** 168, 餘數 2
- **C** 178, 餘數 2
- **D** 178, 餘數 3

24 請問下面哪個算式對兩個數字的比較是正確的?

- **B** 29,073 = 20,000 + 9,000 + 700 + 3
- **C** 10,000 + 6,000 + 400 > 一萬六千四百一十
- **D** 86,502 = 80,000 + 6,000 + 500 + 20
- **25** 以下哪個表達式的值等於 $7 \times \frac{3}{4}$?
 - $A \qquad 21 \times \frac{3}{4}$ $B \qquad 21 \times \frac{3}{28}$ $C \qquad 21 \times \frac{1}{4}$ $D \qquad 21 \times \frac{1}{28}$

梅根在美術課上畫了兩幅矩形壁畫。第一副壁畫的尺寸如下所示。



第二幅壁畫的面積與第一幅壁畫相同,但周長不同。請問下面哪個測量值可能是第二幅壁 畫的邊長?

A 8 英尺和 6 英尺

27

- **B** 5 英尺和 9 英尺
- C 4 英尺和 12 英尺
- **D** 4 英尺和 10 英尺
- 28 傑克從蘋果樹上摘了 60 個蘋果。他用其中 12 個蘋果來製作蘋果醬。然後,將剩餘的蘋 果等分到 6 個禮物籃中。請問以下哪個方程式可用來計算傑克放入每個禮物籃中的蘋果 數 a?
 - **A** $(60 \div 6) 12 = a$
 - **B** $(60 12) \div 6 = a$
 - **C** (60-6) 12 = a
 - **D** $(60 + 12) \div 6 = a$

繼續

29 某個教室的學生在學校花園種植了番茄植物,他們每週測量一次番茄的高度。以下折線圖 顯示這種植物在第二個週末的高度。



第1卷

根據該折線圖,請問有多少株植物的高度大於 $4\frac{1}{2}$ 英寸?

- **A** 0
- **B** 6
- **C** 14
- **D** 20

30

哪句陳述正確?

停止作答

4 年級 2018 數學考試 第 1 卷 2018 年 5 月 1 至 3 日

Grade 4 2018 Mathematics Test Session 1 May 1–3, 2018

姓名:_____



Chinese Edition Grade 4 2018 Mathematics Test Session 2 May 1–3, 2018

紐約州考試計劃 數學考試 第2卷 4 4 2018年5月1至3日

Released Questions

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第2卷 Ó

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,認真思考後再作答。
- 本次考試提供數學工具(一把尺子和一個量角器)供你使用。 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

以下哪個字母的對稱軸最多?





- 32 以下哪組數字顯示了 36 的所有因數?
 - **A** 1, 2, 3, 4, 9, 12, 18, 36
 - **B** 0, 1, 2, 3, 4, 9, 12, 18, 36
 - **C** 1, 2, 3, 4, 6, 9, 12, 18, 36
 - **D** 0, 1, 2, 3, 4, 6, 9, 12, 18, 36
- **33** 以下哪個表達是以展開式寫出的 **125,206**?
 - A 100,000 + 2,000 + 5,000 + 200 + 6
 - **B** 100,000 + 20,000 + 5,000 + 200 + 6
 - **C** 100,000 + 20,000 + 50,000 + 200 + 6
 - **D** 100,000 + 20,000 + 5,000 + 2,000 + 6

繼

下表顯示吉娜班上一些女生上個月到這個月的身高增長情況(單位:英寸)。

姓名	身高增長 (英寸)	
吉娜	<u>3</u> 8	
瑪克辛	<u>2</u> 3	
莎莉	$\frac{2}{4}$	
溫妮莎	<u>3</u> 12	

1 個月身高增長情況

請問哪名女生的身高增長大於 1/2 英寸?

A 吉娜

34

- **B** 瑪克辛
- **C** 莎莉
- **D** 溫妮莎

- **35** 卡爾用了一些布料來製作座套。然後,他又用了8倍的布料來製作帳篷。已知他製作帳 篷使用的布料為24碼。請問以下哪個方程式可用來計算製作座套所用的布料數量?
 - **A** $24 = 8 \times _?$
 - **B** 24 = 8 + ?
 - $\mathbf{C} \qquad 8 \times 24 = \underline{?}$
 - **D** $8 + 24 = \underline{?}$

36 克拉克女士的班級在中午 12:00 下課休息,如下所示。



到下課休息時間結束時,分針轉動了90度。請問下課休息時間是在什麼時間結束的?

- A 中午 12:15
- B 中午 12:30
- C 中午 12:45
- **D** 中午 1:00



- **37** 安德魯在黑板上寫下數字 186,425。請問以下哪個數字中數字 6 的值恰好是安德魯寫出的 數字中數字 6 的值的 10 倍?
 - **A** 681,452
 - **B** 462,017
 - **C** 246,412
 - **D** 125,655

38 在以下空白處填入什麼數字可使下面的方程式成立?

$$6 \times \frac{5}{6} = \underline{?} \times \frac{1}{6}$$

- **A** 5
- **B** 11
- **C** 30

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39

下面哪個圖形顯示的是一對垂直線?





40 為了準備聚會,卡梅隆花店的工作人員要將 **1,323** 枝花插入花瓶。每個花瓶必須插入 **8** 枝花。請問工作人員總共可插滿多少個花瓶?

請寫出你的計算過程。

41 薩曼莎每天往返學校總共要走 2/3 英里的路程。請寫出一個表達式來計算薩曼莎 5 天內往 返學校的總英里路程。然後求該表達式的值。

表達式 _____

請寫出你的計算過程。

答案 ______英里路程

第2卷

42 辛蒂回收了 54 磅紙張。她回收的紙張重量是莫妮卡的 9 倍。請寫出一個方程式來計算莫 妮卡回收的紙張重量 m。然後對該方程式求解,算出莫妮卡回收的紙張重量。

請寫出你的計算過程。

43 在一場寵物展示會的動物中, $\frac{3}{8}$ 的動物是貓, $\frac{4}{8}$ 是狗。其餘動物為兔子。請問兔子占寵 物展示會中動物的幾分之幾?

請寫出你的計算過程。

答案_____



第2卷



請寫出可用來計算角 DBC 度數的方程式。設 n 為角 DBC 的度數。然後算出 n 的度數。 *請寫出你的計算過程。*

答案 n=____度



45 一位教師為其教室購買了8盒橙色橡皮和6盒藍色橡皮。每盒橙色橡皮有24塊,每盒藍 色橡皮有28塊。請問該教師總共為其教室購買了多少塊橡皮?

請寫出你的計算過程。





4 年級 2018 數學考試 第 2 卷 2018 年 5 月 1 至 3 日

Grade 4 2018 Mathematics Test Session 2 May 1–3, 2018

THE STATE EDUCATION DEPARTMENT THE UNIVERSITY OF THE STATE OF NEW YORK / ALBANY, NY 12234 2018 Mathematics Tests Map to the Standards Grade 4 Released Questions on EngageNY

Ouestion	Type	Kev	Points	Standard	Cluster	Subscore	
Book 1	-, F.						
1	Multiple Choice	D	1	CCSS.Math.Content.4.OA.A.1	Operations and Algebraic Thinking	Operations and Algebraic Thinking	
2	Multiple Choice	А	1	CCSS.Math.Content.4.NF.B.3d	Number and Operations— Fractions	Number and Operations— Fractions	
3	Multiple Choice	В	1	CCSS.Math.Content.4.NBT.A.3	Number and Operations in Base Ten	Number and Operations in Base Ten	
4	Multiple Choice	А	1	CCSS.Math.Content.3.MD.B.4	Measurement and Data		
12	Multiple Choice	А	1	CCSS.Math.Content.4.MD.C.5a	Measurement and Data		
13	Multiple Choice	А	1	CCSS.Math.Content.4.NBT.A.1	Number and Operations in Base Ten	Number and Operations in Base Ten	
14	Multiple Choice	С	1	CCSS.Math.Content.4.OA.C.5	Operations and Algebraic Thinking	Operations and Algebraic Thinking	
17	Multiple Choice	А	1	CCSS.Math.Content.4.MD.C.6	Measurement and Data		
18	Multiple Choice	D	1	CCSS.Math.Content.4.NF.B.3b	Number and Operations— Fractions	Number and Operations— Fractions	
23	Multiple Choice	С	1	CCSS.Math.Content.4.NBT.B.6	Number and Operations in Base Ten	Number and Operations in Base Ten	
24	Multiple Choice	А	1	CCSS.Math.Content.4.NBT.A.2	Number and Operations in Base Ten	Number and Operations in Base Ten	
25	Multiple Choice	С	1	CCSS.Math.Content.4.NF.B.4a	Number and Operations— Fractions	Number and Operations— Fractions	
27	Multiple Choice	С	1	CCSS.Math.Content.3.MD.D.8	Measurement and Data		
28	Multiple Choice	В	1	CCSS.Math.Content.4.OA.A.3	Operations and Algebraic Thinking	Operations and Algebraic Thinking	
29	Multiple Choice	С	1	CCSS.Math.Content.4.MD.B.4	Measurement and Data		
30	Multiple Choice	В	1	CCSS.Math.Content.4.NF.A.2	Number and Operations— Fractions	Number and Operations— Fractions	
Book 2							
31	Multiple Choice	С	1	CCSS.Math.Content.4.G.A.3	Geometry		
32	Multiple Choice	С	1	CCSS.Math.Content.4.OA.B.4	Operations and Algebraic Thinking	Operations and Algebraic Thinking	
33	Multiple Choice	В	1	CCSS.Math.Content.4.NBT.A.2	Number and Operations in Base Ten	Number and Operations in Base Ten	
34	Multiple Choice	В	1	CCSS.Math.Content.4.NF.A.2	Number and Operations— Fractions	Number and Operations— Fractions	
35	Multiple Choice	А	1	CCSS.Math.Content.4.OA.A.1	Operations and Algebraic Thinking	Operations and Algebraic Thinking	
36	Multiple Choice	А	1	CCSS.Math.Content.4.MD.C.5b	Measurement and Data		
37	Multiple Choice	В	1	CCSS.Math.Content.4.NBT.A.1	Number and Operations in Base Ten	Number and Operations in Base Ten	
38	Multiple Choice	С	1	CCSS.Math.Content.4.NF.B.4b	Number and Operations— Fractions	Number and Operations-Fractions	
39	Constructed Response		2	CCSS.Math.Content.4.G.A.1	Geometry		
40	Constructed Response		2	CCSS.Math.Content.4.NBT.B.6	Number and Operations in Base Ten	Number and Operations in Base Ten	
41	Constructed Response		2	CCSS.Math.Content.4.NF.B.4c	Number and Operations— Fractions	Number and Operations— Fractions	
42	Constructed Response		2	CCSS.Math.Content.4.OA.A.2	Operations and Algebraic Thinking	Operations and Algebraic Thinking	
43	Constructed Response		2	CCSS.Math.Content.4.NF.B.3c	Number and Operations— Fractions	Number and Operations— Fractions	
44	Constructed Response		2	CCSS.Math.Content.4.MD.C.7	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.