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 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.
Released Questions
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。
1. 简投掷垒球的距离是9英尺。李投掷垒球的距离是简的3倍。请问以下哪個方程式可用來計算李投掷垒球的距离d?

A. $d \times 3 = 9$
B. $d + 3 = 9$
C. $3 + 9 = d$
D. $3 \times 9 = d$

2. 娜塔莎和伊凡两人都在写一篇5页的论文。娜塔莎在上午写完了论文的$\frac{3}{5}$，并在下午写完了论文的$\frac{2}{5}$。伊凡在放学后写完了论文的$\frac{4}{5}$。请问娜塔莎完成论文的进度比伊凡多多少？

A. $\frac{1}{5}$
B. $\frac{2}{5}$
C. $\frac{4}{5}$
D. $\frac{9}{5}$
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 $3\frac{3}{4}$
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？

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
角 ABC 是多少度？

A 60°
B 70°
C 110°
D 120°

以下哪個表達式的值等於 $\frac{7}{12}$？

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

請問下面哪個算式對兩個數字的比較是正確的?

A 四萬六千三百一十五 < 46,350
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

以下哪個表達式的值等於 7 × \frac{3}{4}？

A 21 × \frac{3}{4}
B 21 × \frac{3}{28}
C 21 × \frac{1}{4}
D 21 × \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
B 5 英尺和 9 英尺
C 4 英尺和 12 英尺
D 4 英尺和 10 英尺

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 \((60 + 12) \div 6 = a\)
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。

根據該折線圖，請問有多少株植物的高度大於 英寸？

A  0
B  6
C  14
D  20

哪句陳述正確？

A  \( \frac{4}{12} > \frac{5}{8} \) 因為 \( \frac{5}{8} \) 大於 \( \frac{1}{2} \)，並且 \( \frac{4}{12} \) 比 \( \frac{1}{2} \) 更接近 1。

B  \( \frac{4}{12} < \frac{5}{8} \) 因為 \( \frac{4}{12} \) 小於 \( \frac{1}{2} \)，並且 \( \frac{5}{8} \) 大於 \( \frac{1}{2} \)。

C  \( \frac{5}{8} > \frac{4}{12} \) 因為 \( \frac{4}{12} \) 和 \( \frac{5}{8} \) 都比 \( \frac{1}{2} \) 更接近 1。

D  \( \frac{5}{8} < \frac{4}{12} \) 因為 \( \frac{5}{8} \) 和 \( \frac{4}{12} \) 都小於 \( \frac{1}{2} \)。
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 年級

2018 年 5 月 1 至 3 日

Released Questions
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
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）。

<table>
<thead>
<tr>
<th>姓名</th>
<th>身高增長（英寸）</th>
</tr>
</thead>
<tbody>
<tr>
<td>吉娜</td>
<td>$\frac{3}{8}$</td>
</tr>
<tr>
<td>瑪克辛</td>
<td>$\frac{2}{3}$</td>
</tr>
<tr>
<td>莎莉</td>
<td>$\frac{2}{4}$</td>
</tr>
<tr>
<td>溫妮莎</td>
<td>$\frac{3}{12}$</td>
</tr>
</tbody>
</table>

請問哪名女生的身高增長大於 $\frac{1}{2}$ 英寸？

A 吉娜  
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  $24 = 8 + \_\_\_$
C  $8 \times 24 = \_\_\_$
D  $8 + 24 = \_\_\_$

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？

$$6 \times \frac{5}{6} = \frac{\Box}{6} \times \frac{1}{6}$$

A  5
B  11
C  30
D  36
下面哪個圖形顯示的是一對垂直線？

圖 A

圖 B

圖 C

請解釋你的答案。
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。

答案：_____________個花瓶
薩曼莎每天往返學校總共要走\(\frac{2}{3}\)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。

回答

英里路程
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。

答案  m = ___________ 磅紙
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：______________
下面顯示一個直角三角形 ABC。

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
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。

答案：

塊橡皮
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<tr>
<th>Question</th>
<th>Type</th>
<th>Key</th>
<th>Points</th>
<th>Standard</th>
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<td></td>
<td>CCSS.Math.Content.4.MD.C.7</td>
<td>Measurement and Data</td>
<td></td>
</tr>
</tbody>
</table>

*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.*