



New York State
EDUCATION DEPARTMENT
Knowledge > Skill > Opportunity

**New York State Testing Program
Grade 5
Mathematics Test
Chinese (Simplified)**

Released Questions

2021

New York State administered the Mathematics Tests in May 2021 and is now making the questions from Session 1 of these tests available for review and use. Only Session 1 was required in 2021.



New York State Testing Program Grades 3–8 Mathematics

Released Questions from 2021 Tests

Background

In 2013, New York State (NYS) 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 (NYSED) 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 2021 NYS Grades 3–8 English Language Arts and Mathematics test materials for review, discussion, and use.

In February 2021, with the ongoing COVID-19 pandemic still forcing restrictions on all educational and learning activities statewide, NYSED submitted two federal waiver requests related to state assessment and accountability requirements. The waiver requests addressed the unique circumstances caused by the pandemic that have resulted in many students receiving some or all of their instruction remotely.

Later that month, the United States Department of Education (USDE) informed states that it would not grant a blanket waiver for state assessments. However, the USDE agreed to uncouple state assessments from the Every Student Succeeds Act (ESSA) accountability requirements so that test results will be used solely as a measure of student learning. Additionally, it was decided that NYSED would administer only Session 1 of the Grades 3–8 ELA and Mathematics Tests for the Spring 2021 administration and that the tests would include previously administered questions.

The decision to use previously administered test questions in this extraordinary year was based on guidance from nationally recognized experts in the assessment field and was recommended in a [publication](#) from the Council of Chief State School Officers to state education departments. Reusing test questions provided the benefit of having established scale scores and stable item parameters. Using previously administered test questions also ensured that it will be possible to develop new test forms for 2022 and beyond. Although it was not the driver of the decision, the reuse of previously administered test questions provided an opportunity for cost savings during these unique circumstances where the instructional models used by schools varied throughout the State.

For 2021, the entire Session 1 booklet is being released as this is all that students were required to take. Additionally, NYSED is providing a map that details what learning standards 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 NYSED'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.

New York State P–12 Learning Standards Alignment

The alignment to the New York State P–12 Learning Standards for Mathematics is intended to identify the primary analytic skills necessary to successfully answer each question. 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 (Simplified) Edition

Grade 5

Mathematics Test

Session 1

v202



**纽约州测试项目
数学测试
第 1 部分**

5 年级

v202

Released Questions

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5 年级数学参考表

单位转换

1 英里 = 5,280 英尺

1 英里 = 1,760 码

1 磅 = 16 盎司

1 吨 = 2,000 磅

1 杯 = 8 液体盎司

1 品脱 = 2 杯

1 夸脱 = 2 品脱

1 加仑 = 4 夸脱

1 升 = 1,000 立方厘米

公式

直角长方体

$V = Bh$ 或 $V = lwh$



第 1 部分



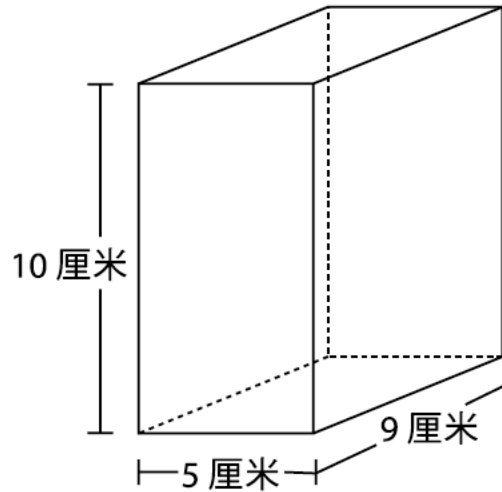
考试提示

以下是一些建议，可以帮助你做到最好：

- 仔细阅读每一道题目，并在做出选择前思考答案。
- 已向你提供了数学工具（一把尺子和一个量角器）和参考表供你在考试中使用。由你决定各工具和参考表将在何时有用。你应当在认为数学工具和参考表对你答题有帮助时使用它们。

1

一个礼品盒的形状是一个直角长方体，如下图所示。



请问该礼品盒的体积是多少立方厘米？

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

2

请问表达式 $\frac{2}{10} + \frac{6}{100}$ 的和是多少？

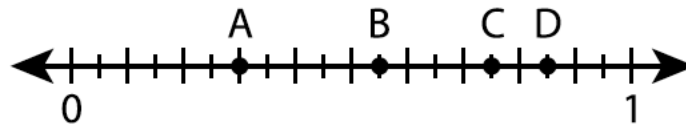
- A $\frac{8}{10}$
- B $\frac{8}{100}$
- C $\frac{26}{10}$
- D $\frac{26}{100}$

续下页

- 3 马克在星期六卖掉了 $2\frac{7}{8}$ 加仑柠檬水。里根在同一天卖掉的柠檬水是马克卖掉部分的 $\frac{2}{3}$ 。请问里根卖掉了多少加仑的柠檬水？

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

- 4 下列数轴上哪一个点代表的数值是 0.75？



- A A 点
- B B 点
- C C 点
- D D 点

5 请问哪个比较是正确的？

A $2.919 > 2.94$

B $0.99 < 0.569$

C $1.27 > 1.189$

D $3.861 < 3.75$

6 贝蒂有 3 只猫和 4 只狗。她每次喂食时会给每只宠物一勺食物，每天喂食两次。请问以下哪个表达式可被用于表示贝蒂一天内总共给她的宠物多少勺食物？

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

B $(2 \times 3) + 4$

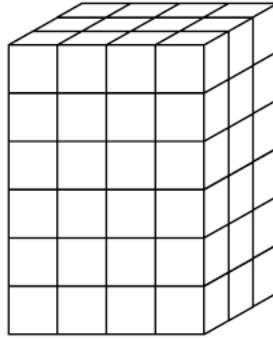
C $2 + (3 + 4)$

D $2 \times (3 + 4)$

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7

下图展示了一个长方体中被填入了多个单位正方体。每个单位正方体的边长为 1 英尺。



请问这个长方体的体积是多少立方英尺？

- A 12
- B 13
- C 54
- D 72

8

请问下列表达式的数值是多少？

$$[(3 \times 4) - 6] + 4 \times 2$$

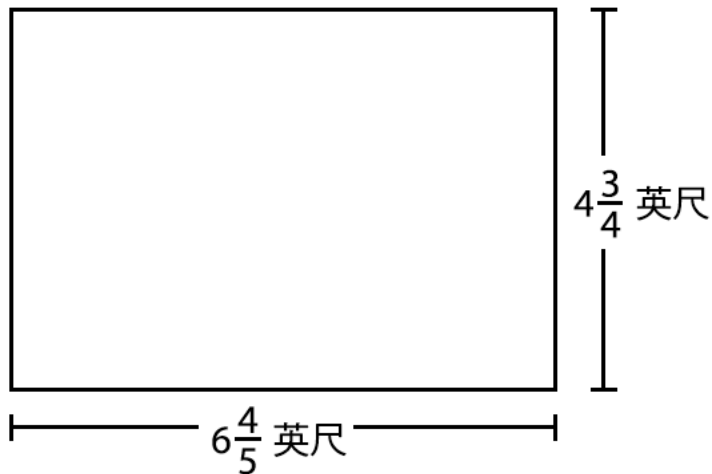
- A 4
- B 14
- C 20
- D 30

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9 里德女士将油和醋混合在一起制作沙拉酱。她每做一份都将 8 液体盎司的油和 3 液体盎司的醋混合在一起。里德女士一共做了 3 份沙拉酱。请问她一共做了多少杯沙拉酱？

- A $1\frac{3}{8}$ 杯
- B $2\frac{1}{16}$ 杯
- C $2\frac{3}{4}$ 杯
- D $4\frac{1}{8}$ 杯

10 请问下列长方形的面积是多少平方英尺？



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

续下页

11 埃德星期六完成了 3 公里远足，星期日完成了 2 公里游泳。请问埃德在星期六和星期日进行远足和游泳的总长度为多少米？

- A 50
- B 500
- C 5,000
- D 50,000

12 请问哪个表达式可用于计算下列表达式的数值？

$$1,284 \div 4$$

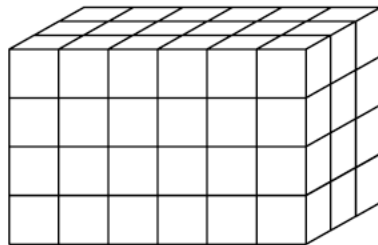
- A $(1,200 \div 4) \times (84 \div 4)$
- B $(1,200 \div 4) \div (84 \div 4)$
- C $(1,200 \div 4) + (84 \div 4)$
- D $(1,200 \div 4) - (84 \div 4)$

续下页

第 7 页

13

请问哪个表达式不可以被用于计算下图中长方体的体积？



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

14

15.74 四舍五入到最近的整数是多少？

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

续下页

15 杰克每次喂鸟时，都会给喂食器添加 $\frac{1}{3}$ 磅的鸟食。如果杰克有 4 磅鸟食，则他可以给喂食器添加多少次食物？

A $1\frac{1}{3}$

B $3\frac{2}{3}$

C 11

D 12

16 卡洛斯使用坚果、葡萄干和麦片制作 1 磅混合零食。以下清单展示了他使用了多少磅坚果和葡萄干。

- $\frac{1}{3}$ 磅坚果

- $\frac{2}{5}$ 磅葡萄干

请问卡洛斯使用了多少磅麦片？

A $\frac{3}{8}$

B $\frac{5}{8}$

C $\frac{4}{15}$

D $\frac{11}{15}$

续下页

17 塔拉的家距离公园 $\frac{3}{4}$ 英里。尼克希的家和公园之间的距离是塔拉的家和公园的距离的 $6\frac{2}{3}$ 倍。请问尼克希的家距离公园有多少英里？

A 2

B 5

C $5\frac{1}{6}$

D $8\frac{8}{9}$

18 请问哪个陈述描述了 $5 \times \frac{1}{2}$ 的乘积？

A 该乘积小于 $\frac{1}{2}$ 。

B 该乘积大于 5。

C 该乘积在 5 和 6 之间。

D 该乘积在 $\frac{1}{2}$ 和 5 之间。

续下页

19 请问表达式 $\frac{1}{7} \div 5$ 的数值是多少?

A $\frac{1}{12}$

B $\frac{1}{35}$

C $\frac{5}{7}$

D $\frac{6}{7}$

20 柯尔有一个面积为 16.02 平方米大小的长方形花园。这个花园长 4.5 米。请问花园宽多少米?

A 3.56

B 11.52

C 16.12

D 20.52

21 一所学校共筹集了 \$1,648 用于购置新书。已筹集的款项将被平均分配给 8 个不同班级。请问每个班级可以收到多少款项?

A \$206

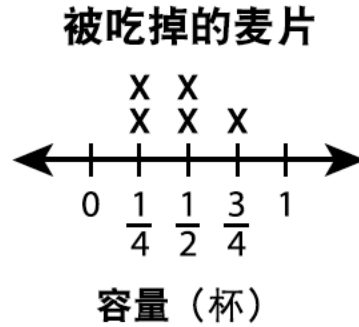
B \$207

C \$260

D \$270

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下列折线图表示了莎安在 5 天内吃掉的麦片量。

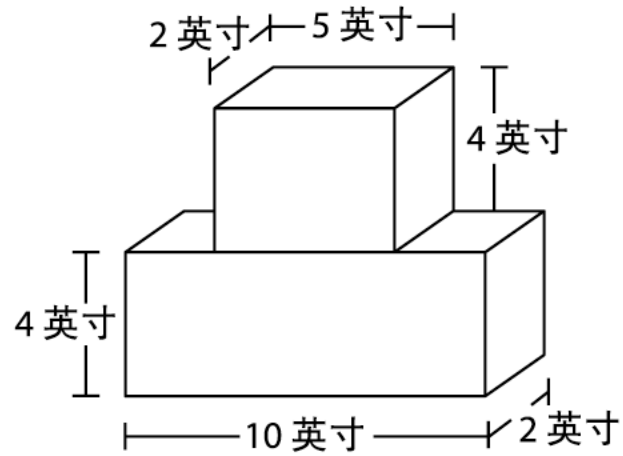


请问莎安在 5 天内一共吃掉了多少杯麦片？

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

续下页

莱纳使用下图中的两块积木搭建了一座塔。



莱纳的塔

请问莱纳搭建的塔的总体积是多少立方英寸？

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

5 年级
数学测试
第 1 部分
v202

Grade 5
Mathematics Test
Session 1
v202

THE STATE EDUCATION DEPARTMENT
THE UNIVERSITY OF THE STATE OF NEW YORK / ALBANY, NY 12234
2021 Mathematics Tests Map to the Standards
Grade 5 Released Questions

Question	Type	Key	Points	Standard	Cluster	Subscore	Secondary Standard(s)
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	
5	Multiple Choice	C	1	CCSS.Math.Content.5.NBT.A.3b	Number and Operations in Base Ten	Number and Operations in Base Ten	
6	Multiple Choice	D	1	CCSS.Math.Content.5.OA.A.2	Operations and Algebraic Thinking		
7	Multiple Choice	D	1	CCSS.Math.Content.5.MD.C.4	Measurement and Data	Measurement and Data	
8	Multiple Choice	B	1	CCSS.Math.Content.5.OA.A.1	Operations and Algebraic Thinking		
9	Multiple Choice	D	1	CCSS.Math.Content.5.MD.A.1	Measurement and Data	Measurement and Data	
10	Multiple Choice	D	1	CCSS.Math.Content.5.NF.B.4b	Number and Operations - Fractions	Number and Operations - Fractions	
11	Multiple Choice	C	1	CCSS.Math.Content.4.MD.A.2	Measurement and Data	Measurement and Data	
12	Multiple Choice	C	1	CCSS.Math.Content.5.NBT.B.6	Number and Operations in Base Ten	Number and Operations in Base Ten	
13	Multiple Choice	D	1	CCSS.Math.Content.5.MD.C.5a	Measurement and Data	Measurement and Data	
14	Multiple Choice	C	1	CCSS.Math.Content.5.NBT.A.4	Number and Operations in Base Ten	Number and Operations in Base Ten	
15	Multiple Choice	D	1	CCSS.Math.Content.5.NF.B.7c	Number and Operations - Fractions	Number and Operations - Fractions	
16	Multiple Choice	C	1	CCSS.Math.Content.5.NF.A.2	Number and Operations - Fractions	Number and Operations - Fractions	
17	Multiple Choice	B	1	CCSS.Math.Content.5.NF.B.6	Number and Operations - Fractions	Number and Operations - Fractions	
18	Multiple Choice	D	1	CCSS.Math.Content.5.NF.B.5a	Number and Operations - Fractions	Number and Operations - Fractions	
19	Multiple Choice	B	1	CCSS.Math.Content.5.NF.B.7a	Number and Operations - Fractions	Number and Operations - Fractions	
20	Multiple Choice	A	1	CCSS.Math.Content.5.NBT.B.7	Number and Operations in Base Ten	Number and Operations in Base Ten	
21	Multiple Choice	A	1	CCSS.Math.Content.5.NBT.B.6	Number and Operations in Base Ten	Number and Operations in Base Ten	
22	Multiple Choice	D	1	CCSS.Math.Content.5.MD.B.2	Measurement and Data	Measurement and Data	
23	Multiple Choice	D	1	CCSS.Math.Content.5.MD.C.5c	Measurement and Data	Measurement and Data	

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.