Level 2

原版引进，英语能力自我挑战
快乐学数学，美式学习场景全体验
双语学习，更可助你迈出出国留学第一步

2级

美国原版青少年核心能力拓展

好玩的数学

Targeted Mathematics Student Guided Practice Book

主 编：〔美〕莎拉·约翰逊

天津出版传媒集团
天津科技翻译出版有限公司

Level 2

2级

美国原版青少年核心能力拓展

好玩的数学

Targeted Mathematics Student Guided Practice Book

主 编：〔美〕莎拉·约翰逊

天津出版传媒集团

天津科技翻译出版有限公司

著作权合同登记号:图字:02-2013-305

图书在版编目(CIP)数据

美国原版青少年核心能力拓展：好玩的数学=Targeted mathematics: student guided practice book. 2级:英文/(美)约翰逊(Johnson, S.)主编. —天津:天津科技翻译出版有限公司, 2014.4

ISBN 978-7-5433-3345-1

Ⅰ.①美… Ⅱ.①约… Ⅲ.①数学—少儿读物 ②英语—口语—少儿读物 Ⅳ.①O1-49 ②H319.9-49

中国版本图书馆CIP数据核字(2014)第002081号

Copyright Ⓒ 2013 by Teacher Created Materials, Inc.

All rights reserved. No part of this book may be used or reproduced in any manner whatsoever without the written permission of the Publisher.

授权单位：Teacher Created Materials, Inc.
出　　版：天津科技翻译出版有限公司
出 版 人：刘 庆
地　　址：天津市南开区白堤路244号
邮政编码：300192
电　　话：022-87894896
传　　真：022-87893237
网　　址：www.tsttpc.com
印　　刷：唐山天意印刷有限责任公司
发　　行：全国新华书店
版本记录：880×1230　16开本　9.75印张　195千字
2014年4月第1版　2014年4月第1次印刷
定价:25.00元

(如发现印装问题,可与出版社调换)

编者前言

《美国原版青少年核心能力拓展:好玩的数学》(学前阶段及1~8级)是从美国教师创新教材出版公司(Teacher Created Materials Inc.)引进的现行介入式数学指南,全面反映了美国学前班至八年级数学课的现行教学内容及教学要求,同时也为我们展示了美国青少年丰富多彩、生动活泼的学习场景。

阅读使用这套丛书会让你有一种犹如在美国上学、与美国的小朋友同步学习的亲身体验。从中不仅可以了解美国学生在数学课上学些什么,做些什么样的作业,考些什么样的数学题;还可以知道他们的老师在课堂上讲些什么,以及对学生的要求是什么。由此你会发现,他们的数学课与我们的有相同之处,但也并非完全相同。我们侧重于背公式,做习题,备考应试;而他们侧重于理解和掌握数学的基础知识,既讲述初等数学的内容,又介绍了一些高等数学、数论、概率论、统计学的知识,并与其他学科相互联系,从而了解数学在其他学科中的应用,而且在教学中注意联系实际,注重实践应用,因此上数学课不会让学生感到枯燥乏味,而是感觉生动有趣。二者有着不同的教学理念和方式,如果能通过这套丛书的学习将二者有机地结合起来,取长补短,优势互补,必能开阔你的眼界,提高你对数学概念的理解,提升你的应用能力(当然也包括应试能力)。

数学是世界各地通用的一门学科,有着共同的概念、公式、术语、习题、计算方法,因此在这套书中有着非常熟悉的学习内容和知识背景:学过的数学知识,做过的数学习题,考过的数学试题。特别之处在于这套丛书以英文原版形式体现,这就为你营造了一个在熟悉的背景下学习英语的环境,学会用地道的英语来表达学过的知识,表达真实的日常生活和学习活动,学会用英语和同学进行学习互动,从而大幅度提高你的英语水平。既学了数学又学了英语(而且是非常实用的英语),岂非两全其美的好事。

这套丛书适用于我国广大青少年读者,尤其是双语学校的学生以及打算到英语国家上高中、上大学的学生。学习这套丛书,就等于在国内体验了国外的学校生活,这对今后的深造无疑是大有裨益的。

打开书本,开启你在国内"留学"的全新生活吧!

英语就得天天练——阅读美国孩子的课余英文原版书

好玩的数学——体验美国青少年数学学习的乐趣

Table of Contents

Student Welcome Letter 1
Diagnostic Test 2
Lesson 1
Place-Value Chart 7
Card Trading 8
Drawing a Diagram 1 9
Standardized Test Preparation 1 10
Lesson 2
Comparing Numbers 11
Springtime 12
Standardized Test Preparation 2 14
Lesson 3
Our Class Number Line 15
Hundreds, Tens, and Ones 16
Drawing a Diagram 1 Problems 17
Standardized Test Preparation 3 18
Lesson 4
How Close Can You Get? 19
All Aboard 20
Standardized Test Preparation 4 22
Lesson 5
Coloring Fractions 23
Drawing a Diagram 1 Group Problems 24
Standardized Test Preparation 5 25
Lesson 6
Checking Calculations 26
Guessing and Checking 27
Standardized Test Preparation 6 28
Lesson 7
Checking Subtraction Calculations 29
Rag Rug Making 30
Standardized Test Preparation 7 32
Lesson 8
Mixed Addition and Subtraction 33
Guessing and Checking Problems 34
Standardized Test Preparation 8 35
Lesson 9
How Many? 36
Monster Madness 37
Seeds 38
Standardized Test Preparation 9 40
Lesson 10
Countdown to Zero 41
Guessing and Checking Group Problems 42
Standardized Test Preparation 10 43
Lesson 11
Counting in Threes and Fours 44
Looking for a Pattern 45
Standardized Test Preparation 11 46
Lesson 12
Patterns and Sequences 47
Baked Goods 48
Standardized Test Preparation 12 50
Lesson 13
Exploring Fact Families 51
Looking for a Pattern Problems 52
Standardized Test Preparation 13 53
Lesson 14
Blotty Bother! 54
A Berry Field Trip 55
Standardized Test Preparation 14 57
Lesson 15
Story Problem Cards 58
Looking for a Pattern Group Problems 59
Standardized Test Preparation 15 60
Lesson 16
What Does It Measure? 61
Acting It Out or Using Concrete Materials 62
Standardized Test Preparation 16 63

此为试读,需要完整PDF请访问: www.ertongbook.com

目 录

欢迎信 1
摸底测试 2
Lesson 1
进位图 7
数数卡片 8
图解法 1 9
标准考前测试 1 10
Lesson 2
数字比大小 11
春天来啦 12
标准考前测试 2 14
Lesson 3
我们班的数字线 15
百位数，十位数，个数位 16
图解法 1 练习 17
标准考前测试 3 18
Lesson 4
你能猜多准？ 19
上车上车 20
标准考前测试 4 22
Lesson 5
用颜色标出分数 23
图解法 1 分组练习 24
标准考前测试 5 25
Lesson 6
验算 26
估算与验算 27
标准考前测试 6 28
Lesson 7
减法验算 29
制作碎布地毯 30
标准考前测试 7 32
Lesson 8
加减混合运算 33
估算与验算 练习 34
标准考前测试 8 35
Lesson 9
多少个？ 36
疯狂小妖怪 37
种子 38
标准考前测试 9 40
Lesson 10
倒数到0 41
估算与验算 分组练习 42
标准考前测试 10 43
Lesson 11
三个三个地数，四个四个地数 44
找规律 45
标准考前测试 11 46
Lesson 12
规律与序列 47
面点 48
标准考前测试 12 50
Lesson 13
换一种算式 51
找规律 练习 52
标准考前测试 13 53
Lesson 14
到处都是墨水点！ 54
浆果园之旅 55
标准考前测试 14 57
Lesson 15
应用题卡片 58
找规律 分组练习 59
标准考前测试 15 60
Lesson 16
拿什么来测量？ 61
演示或用小玩具解题 62
标准考前测试 16 63

Table of Contents

Lesson 17

Measuring Practice 64
Measuring People 65
Refreshing Drinks 66
Standardized Test Preparation 17 68

Lesson 18

Comparing Cards 69
Comparing Objects 71
Acting It Out or Using Concrete Materials Problems 72
Standardized Test Preparation 18 73

Lesson 19

Elapsed Time 74
Passage of Time 75
A Variety of Pies 76
Standardized Test Preparation 19 78

Lesson 20

Money Problems 79
Acting It Out or Using Concrete Materials Group Problems 80
Standardized Test Preparation 20 81

Lesson 21

Sorting Shapes 82
Drawing a Diagram 2 83
Standardized Test Preparation 21 84

Lesson 22

Three-Dimensional Shapes 85
What's the Three-Dimensional Shape? 86
Everything in Its Place 87
Standardized Test Preparation 22 89

Lesson 23

Sorting Three-Dimensional Shapes 90
Shapes 91
Drawing a Diagram 2 Problems 93
Standardized Test Preparation 23 94

Lesson 24

Three-Dimensional Inventions 95
Three-Dimensional Inventions Table 96
Cookie Time 97
Standardized Test Preparation 24 99

Lesson 25

Symmetry Practice 100
Drawing a Diagram 2 Group Problems 101
Standardized Test Preparation 25 102

Lesson 26

Probability Line 103
Creating a Table 104
Standardized Test Preparation 26 105

Lesson 27

Testing Probability 106
Probability Event Cards 107
On the Farm 109
Standardized Test Preparation 27 111

Lesson 28

Reading Bar Graphs 112
Reading Rocks! 113
Creating a Table Problems 114
Standardized Test Preparation 28 115

Lesson 29

Traffic Survey 116
Bird Study 117
Wilson County Shelter 118
Standardized Test Preparation 29 120

Lesson 30

My Graph 121
Creating a Table Group Problems 122
Standardized Test Preparation 30 123

Appendix A: Games Directions 124
Appendix B: Mathematics Chart 132
Hundred Chart 134
Appendix C: Glossary 135
Appendix D: Answer Key 140

目 录

Lesson 17
测量练习 64
量身高 65
提神饮料 66
标准考前测试 17 68
Lesson 18
比较卡片 69
比较物体 71
演示或用小玩具解题 练习 72
标准考前测试 18 73
Lesson 19
耗去的时间 74
时间流逝 75
各式各样的派 76
标准考前测试 19 78
Lesson 20
我们来算算账 79
演示或用小玩具解题 分组练习 80
标准考前测试 20 81
Lesson 21
图形分类 82
图解法 2 83
标准考前测试 21 84
Lesson 22
立体图形 85
什么是立体图形? 86
把每样东西归位 87
标准考前测试 22 89
Lesson 23
立体图形分类 90
立体图形 91
图解法2 练习 93
标准考前测试 23 94
Lesson 24
立体小发明 95
立体小发明表格 96
制作曲奇饼 97
标准考前测试 24 99
Lesson 25
对称问题 100
图解法2 分组练习 101
标准考前测试 25 102
Lesson 26
可能性（概率）直线 103
做表解题法 104
标准考前测试 26 105
Lesson 27
验证可能性 106
可能发生事件卡 107
在农场 109
标准考前测试 27 111
Lesson 28
来看条形图 112
还是条形图！ 113
做表解题法 练习 114
标准考前测试 28 115
Lesson 29
交通调查表 116
鸟类调研 117
威尔森流浪猫/狗救助所 118
标准考前测试 29 120
Lesson 30
我的图表 121
做表解题法 分组练习 122
标准考前测试 30 123
附录A： 游戏指南 124
附录B： 数学用表 132
百以内数字表 134
附录C： 词汇表 135
附录D： 参考答案 140

Student Welcome Letter

欢迎信

Dear Student,

You are starting a math program that will help you review mathematics. In school, you have learned many math skills. This program will help you review what you already know how to do in math. It will also help you see what you need to learn. You will learn important math concepts, skills, and vocabulary so that you are ready for next year.

Sometimes, students have trouble learning math. It can seem confusing. This program will help you practice math every day, so you will get better at math.

You will review many skills you have already learned in school. Some of those skills include addition, fractions, and problem solving.

Please sign the bottom of this letter. This shows that you are ready to learn and have fun!

_____

Student Signature（学生签名）

Diagnostic Test
摸底测试

1 Which number means nine hundreds (百), seven tens, and two ones?

Ⓐ 979

Ⓑ 729

Ⓒ 972

Ⓓ 907

2 Which number sentence (算式) below is correct?

Ⓕ 63 > 97

Ⓖ 36 < 79

Ⓗ 4 = 5

Ⓙ 45 > 54

3 Ricardo hit a baseball (棒球) 167 feet (英尺). Peter hit the ball 174 feet. Jamie hit the ball 101 feet. Colin hit the ball 143 feet. Who hit the ball the farthest (最远)?

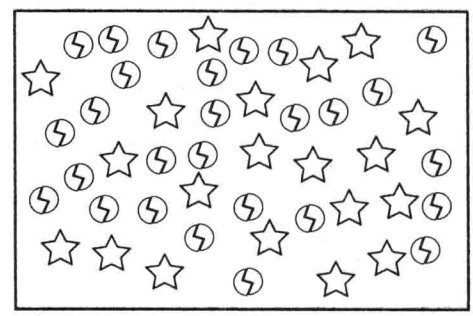
Ⓐ Ricardo

Ⓑ Peter

Ⓒ Jamie

Ⓓ Colin

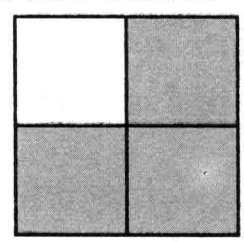
4 What is the best estimate (估算) for the number of circles?



Ⓕ 30 Ⓗ 300

Ⓖ 3 Ⓙ 3,000

5 What fraction (几分之几) of the shape is **NOT** shaded?



Ⓐ $\frac{1}{4}$ Ⓒ $\frac{3}{4}$

Ⓑ $\frac{2}{4}$ Ⓓ $\frac{3}{5}$

6 What is the sum (总和) of 12 and 5?

Ⓕ 7

Ⓖ 18

Ⓗ 17

Ⓙ 62

Diagnostic Test *(cont.)*

7 Yi has 39¢（美分）. She spends 28¢ on a lollipop（棒棒糖）. How much money does she have left?

Ⓐ 1¢

Ⓑ 67¢

Ⓒ 10¢

Ⓓ 11¢

8 What is the missing number in the pattern?

45 – 12 = 33
45 – ____ = 23
45 – 32 = 13

Ⓕ 22 Ⓗ 32

Ⓖ 23 Ⓙ 11

9 Which of the following is another way（另一种方式） to make 4 x 3?

Ⓐ 4 + 4 + 4

Ⓑ 3 + 3 + 3 + 3 + 3

Ⓒ 12 x 3

Ⓓ 12 + 12 + 12

10 Eight objects can be divided into ____ equal groups of 2.

Ⓕ 5

Ⓖ 4

Ⓗ 2

Ⓙ 3

11 What is the missing number in the sequence?

10, 13, 16, _____, 22, 25

Ⓐ 21

Ⓑ 18

Ⓒ 19

Ⓓ 20

12 What is the next number sentence in the pattern?

34 + 4 = 38
44 + 4 = 48

Ⓕ 54 + 5 = 59

Ⓖ 54 + 4 = 58

Ⓗ 54 + 6 = 60

Ⓙ 45 + 4 = 49

此为试读，需要完整PDF请访问：www.ertongbook.com

Diagnostic Test *(cont.)*

13 Which of the choices below belongs in the fact family with the following numbers（哪个算式带有下列三个数字）:

7 9 16

(A) 16 – 4 = 12

(B) 7 + 9 = 16

(C) 7 + 3 = 10

(D) 9 + 16 = 25

14 Find the missing number.

27 + _____ = 65

(F) 37

(G) 40

(H) 38

(J) 39

15 Jill finished a book in 3 nights. She read 48 pages each night. How many pages did she read?

(A) 140 pages

(B) 48 pages

(C) 96 pages

(D) 144 pages

16 Which of these units of measurement（计量单位） is best to measure the length of your desk?

(F) paper clip（纸曲别针）

(G) body length（身长）

(H) crayon（蜡笔）

(J) jumprope（跳绳）

17 What is a reasonable measure for the length of a quarter（25美分硬币）?

(A) 7 centimeters

(B) 10 centimeters

(C) 13 centimeters

(D) 3 centimeters

18 Which of these objects weighs more than a pound?

(F) hanger

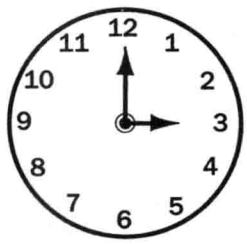
(G) radio

(H) penny

(J) pencil

Diagnostic Test *(cont.)*

19 How much time has passed?



Ⓐ 30 min.

Ⓑ 1 hr.

Ⓒ 1hr. 30 min.

Ⓓ 2 hr. 30 min

20 You have $0.34. You buy a pencil that costs $0.12. How much money do you have left?

Ⓕ $0.23

Ⓖ $0.20

Ⓗ $0.21

Ⓙ $0.22

21 How are these two shapes similar?

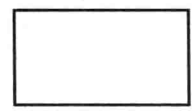
Ⓐ Both have 3 sides.

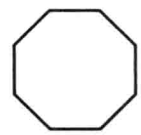
Ⓑ Both have 5 corners.

Ⓒ Both are triangles.

Ⓓ Both have an odd number (奇数) of sides.

22 Which of these shapes has 5 sides and 5 corners?





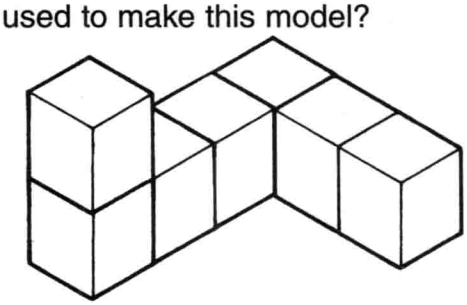
Ⓕ rectangle

Ⓗ triangle

Ⓖ octagon (八边形)

Ⓙ pentagon (五角形)

23 How many cubes (立方体) were used to make this model?



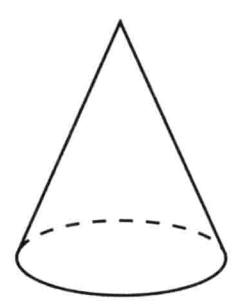
Ⓐ 8

Ⓒ 6

Ⓑ 7

Ⓓ 5

24 What is the name of this shape?



Ⓕ cone (圆锥体)

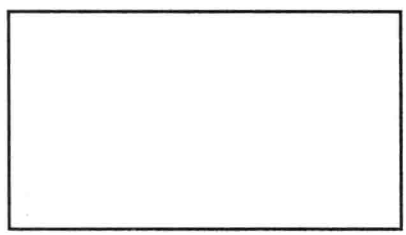
Ⓗ cylinder (圆柱体)

Ⓖ pentagon

Ⓙ prism (棱柱)

Diagnostic Test *(cont.)*

25 How many lines of symmetry (对称) does this shape have?



Ⓐ 4 Ⓒ 1

Ⓑ 2 Ⓓ 6

26 What is the probability that your desk is made of chocolate?你的书桌是巧克力做成的可能性有多大?

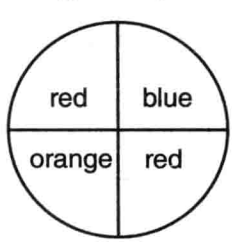
Ⓕ likely

Ⓖ certain

Ⓗ impossible

Ⓙ unlikely

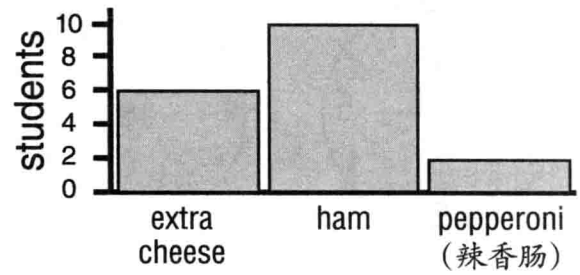
27 Which color are you most likely to land on using the spinner below?



Ⓐ red Ⓒ orange

Ⓑ yellow Ⓓ blue

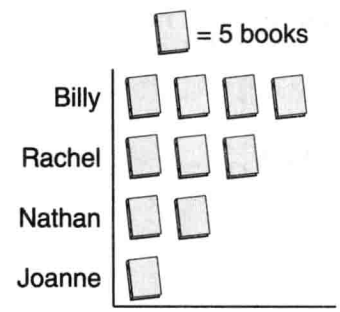
28 How many students wanted extra cheese on their pizza?



Ⓕ 2 students Ⓗ 3 students

Ⓖ 6 students Ⓙ 10 students

29 How many books did Billy read?



Ⓐ 20 books Ⓒ 10 books

Ⓑ 15 books Ⓓ 5 books

30 How many people bought burgers (汉堡包) at the local fair?

Foods	Tally
chicken	𝍸 𝍸 𝍸 |
burgers	𝍸 𝍸 ||||
hot dogs	𝍸 𝍸 𝍸

Ⓕ 16 people Ⓗ 14 people

Ⓖ 11 people Ⓙ 15 people

Place-Value Chart
进位图

Directions: Choose any three-digit number. Write the digits in the correct column. Draw base ten blocks to show the value of each digit. 任选一个三位数，将数字写进对应的栏里。画出十进制计数方块来显示每一位的数值。

Hundreds	Tens	Ones

Card Trading

数数卡片

Directions: Complete the charts. Then solve the word problems.

B.B. and J.C. sorted their cards by sport. Draw base ten blocks to show the amount in each group of cards.

B.B.'s Cards			
Baseball		Soccer	
6	4	2	5

J.C.'s Cards			
Football		Basketball	
3	3	2	6

1. B.B. has 64 baseball cards. How many groups of ten? _____ How many ones? _____
2. J.C. has 26 basketball cards. How many groups of ten? _____ How many ones? _____
3. B.B. has 25 soccer cards. How many groups of ten? _____ How many ones? _____
4. J.C. has 33 football cards. How many groups of ten? _____ How many ones? _____
5. B.B. wanted to know how many cards he had in all. Help him solve this problem. B.B. had _____ cards in all. Tell how you solved this problem.

   _____

   _____

6. J.C. thought he had more cards than B.B. Help J.C. find the sum of all his cards. J.C. had _____ cards in all. Tell how you solved this problem.

   _____

   _____

7. Who had more cards, J.C. or B.B.? _____ Explain your answer.

   _____

   _____

Drawing a Diagram 1

图解法 1

Sometimes, a word problem is hard. Draw a diagram or picture of the word problem. It can help you see the answer. You can picture the answer in your mind. Then, the information in the problem is clearer. 有时候，一道文字应用题会很难。画图解能帮你找出答案。你可以在脑海中想象一下，然后题目信息就更清楚了。

You do not have to draw the real objects from the word problem. Use simple symbols or pictures. The symbols can stand for the objects in the word problem. For example, you can draw a circle to stand for an apple. 你无须真的画出题目中的物体，使用简单记号或者图标即可，你可以画一个圆代表一个苹果。

Some problems have more than one step. Drawing diagrams helps you keep track of the information in each step. Diagrams help you to sort out your thoughts. This makes a problem simpler. 有些题目不只一步，图解法能帮你理清每一步的信息，理清思维，这样题目就简单多了。

Problem: Shoes

The Problem 问题

There are 5 pairs of shoes on a shelf. There are boots (靴子), sneakers (运动鞋), flip-flops (夹脚拖鞋), slippers (拖鞋), and dress shoes (皮鞋). The shoes are in a row. The sneakers are last (on the right). The dress shoes are in the middle of the shelf. The boots are after the dress shoes. The flip flops are first. The slippers are before the dress shoes. In what order are the shoes from left to right?

Understanding the Problem 理解问题

- *What do we know?*

  The shoes are in a row. The shoes are on a shelf. The shoes are in a specific order.

- *What do we need to find out?*

  What order the shoes are in.

Planning and Communicating a Solution 计划与交流解决方法

By drawing a picture, it is easy to figure out the order of the shoes.

Drawing a picture helps you solve the problem. You can see the answer. You will make fewer mistakes.

For this picture, you do not need to actually draw shoes. You can draw rectangles to stand for the shoes. Then, write letters from the shoes in the rectangles.

B = boots
D = dress shoes
SL = slippers
F = flip-flops
SN = sneakers

F	SL	D	B	SN

- *Do you see the answer?*

  The order is: flip-flops, slippers, dress shoes, boots, and sneakers.

Reflecting and Generalizing 回想与归纳

Drawing a diagram helped you see the correct order. Without the picture, you might have gotten confused about the order.

Extension 拓展题目

There are seven cans of food on a shelf. There are peas, beans, carrots, soup, corn, tuna, and chili. They are in a row. The soup is last (on the right). The beans are in the middle of the shelf. The peas are third. The carrots are sixth. The chili is next to the beans. The tuna is first. The corn is after the tuna. In what order are the cans from left to right?

此为试读，需要完整PDF请访问：www.ertongbook.com