

Level 1

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

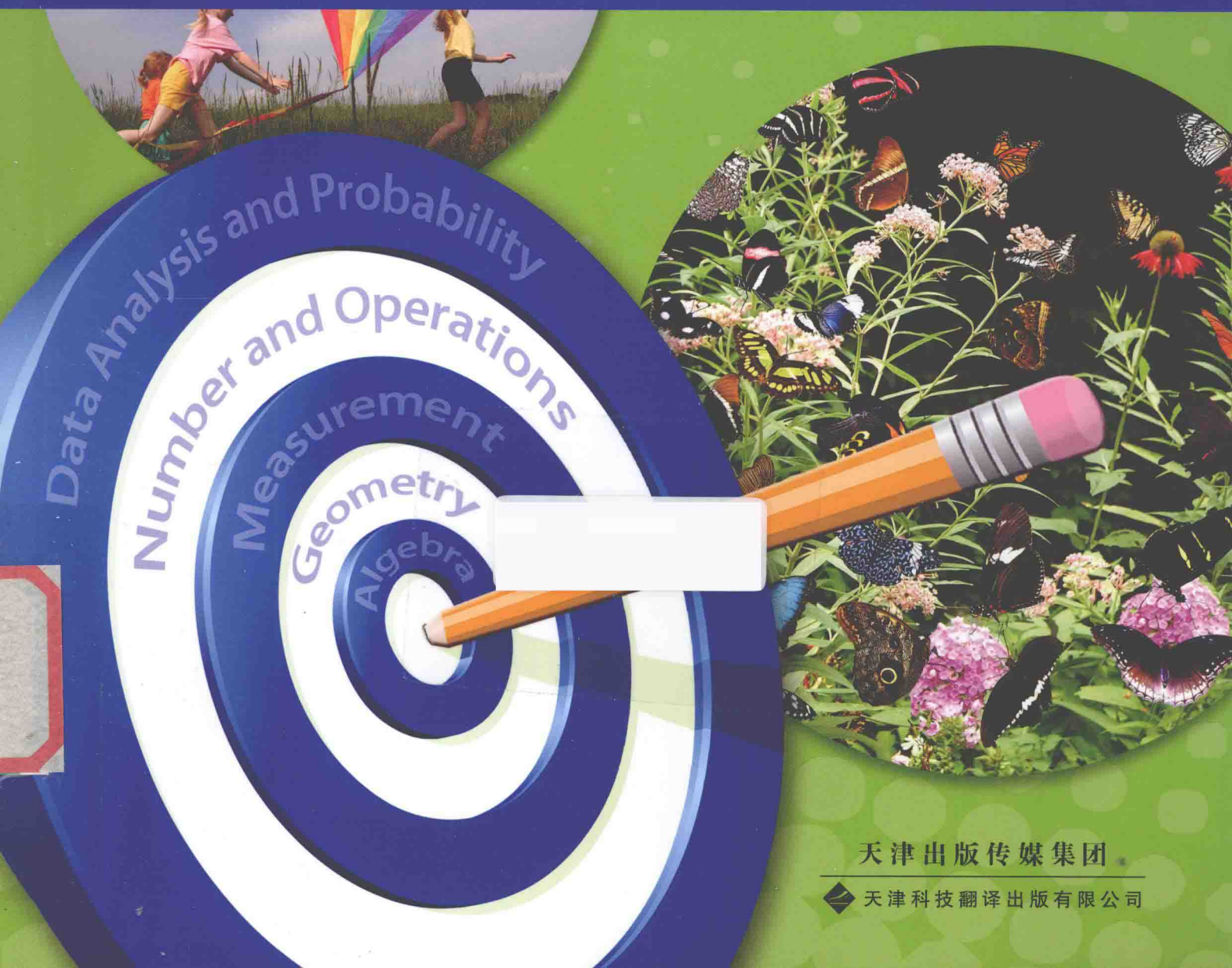
1 级

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 1

1 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:02-2013-304

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. 1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 978-7-5433-3351-2

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 (2013) 第 321602 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 | Subtracting with Number Lines..... | 37 |
| Diagnostic Test | 2 | <i>Drawing a Diagram 1 Problems</i> | 38 |
| Lesson 1 | | Standardized Test Preparation 8..... | 39 |
| Tens and Ones | 7 | Lesson 9 | |
| Acting It Out or Using Concrete Materials 1.... | 8 | Caterpillar Story | 40 |
| Standardized Test Preparation 1 | 9 | Butterfly Gardens | 41 |
| Lesson 2 | | Standardized Test Preparation 9..... | 43 |
| Finding Tens and Ones | 10 | Lesson 10 | |
| Tens and Ones Cards..... | 11 | Which Operation? | 44 |
| String Puppets | 13 | <i>Drawing a Diagram 1 Group Problems</i> | 45 |
| Standardized Test Preparation 2 | 15 | Standardized Test Preparation 10..... | 46 |
| Lesson 3 | | Lesson 11 | |
| Ordering Numbers Recording Sheet | 16 | Fact Families..... | 47 |
| Ordering..... | 17 | Looking for a Pattern 1..... | 48 |
| <i>Acting It Out or Using Concrete</i> | | Standardized Test Preparation 11..... | 49 |
| <i>Materials 1 Problems</i> | 19 | Lesson 12 | |
| Standardized Test Preparation 3 | 20 | Making Numbers | 50 |
| Lesson 4 | | Playing Soccer | 52 |
| Line Them Up! | 21 | Standardized Test Preparation 12..... | 54 |
| Guide Dogs Go to School | 22 | Lesson 13 | |
| Standardized Test Preparation 4 | 24 | Hundred Chart Patterns..... | 55 |
| Lesson 5 | | Twos..... | 56 |
| Ordinal Beads..... | 25 | <i>Looking for a Pattern 1 Problems</i> | 57 |
| <i>Acting It Out or Using Concrete</i> | | Standardized Test Preparation 13..... | 58 |
| <i>Materials 1 Group Problems</i> | 26 | Lesson 14 | |
| Standardized Test Preparation 5 | 27 | Groupings | 59 |
| Lesson 6 | | Perfect Patterns..... | 60 |
| Adding with Number Lines..... | 28 | Standardized Test Preparation 14..... | 62 |
| Drawing a Diagram 1..... | 29 | Lesson 15 | |
| Standardized Test Preparation 6 | 30 | Handfuls..... | 63 |
| Lesson 7 | | <i>Looking for a Pattern 1 Group Problems</i> | 64 |
| Eighteen Muffins..... | 31 | Standardized Test Preparation 15..... | 65 |
| Butterflies | 32 | Lesson 16 | |
| An Inside Look at the Baseball..... | 33 | Making Equal Parts..... | 66 |
| Standardized Test Preparation 7 | 35 | Sharing Fairly | 67 |
| Lesson 8 | | Drawing a Diagram 2..... | 69 |
| Shape Subtractions | 36 | Standardized Test Preparation 16..... | 70 |

目 录

| | | | |
|-----------------------|----|------------------|----|
| 欢迎信 | 1 | 图解法1 练习 | 38 |
| 摸底测试 | 2 | 标准考前测试 8 | 39 |
| Lesson 1 | | Lesson 9 | |
| 十位数和个位数 | 7 | 毛毛虫的故事 | 40 |
| 演示或用小玩具解题 1 | 8 | 蝴蝶花园 | 41 |
| 标准考前测试 1 | 9 | 标准考前测试 9 | 43 |
| Lesson 2 | | Lesson 10 | |
| 找出十位数和个位数 | 10 | 是加是减? | 44 |
| 数字卡 | 11 | 图解法1 分组练习 | 45 |
| 提线木偶 | 13 | 标准考前测试 10 | 46 |
| 标准考前测试 2 | 15 | Lesson 11 | |
| Lesson 3 | | 算式填空 | 47 |
| 数字排序记录表 | 16 | 找规律 1 | 48 |
| 排序 | 17 | 标准考前测试 11 | 49 |
| 演示或用小玩具解题1 练习 | 19 | Lesson 12 | |
| 标准考前测试 3 | 20 | 给出答案写算式 | 50 |
| Lesson 4 | | 踢足球 | 52 |
| 连起来! | 21 | 标准考前测试 12 | 54 |
| 导盲犬去上学 | 22 | Lesson 13 | |
| 标准考前测试 4 | 24 | 100以内数字规律 | 55 |
| Lesson 5 | | 两个两个地数 | 56 |
| 珠串 | 25 | 找规律 1 练习 | 57 |
| 演示或用小玩具解题1 分组练习 | 26 | 标准考前测试 13 | 58 |
| 标准考前测试 5 | 27 | Lesson 14 | |
| Lesson 6 | | 分组 | 59 |
| 用数线做加法 | 28 | 完美的规律 | 60 |
| 图解法 1 | 29 | 标准考前测试 14 | 62 |
| 标准考前测试 6 | 30 | Lesson 15 | |
| Lesson 7 | | 一大把到底有多少 | 63 |
| 18个杯形小蛋糕 | 31 | 找规律 1 分组练习 | 64 |
| 蝴蝶 | 32 | 标准考前测试 15 | 65 |
| 来看看棒球里面 | 33 | Lesson 16 | |
| 标准考前测试 7 | 35 | 等分 | 66 |
| Lesson 8 | | 平均分 | 67 |
| 写出减法题 | 36 | 图解法 2 | 69 |
| 用数线做减法 | 37 | 标准考前测试 16 | 70 |

Table of Contents

Lesson 17

| | |
|---------------------------------------|----|
| Finding Patterns | 71 |
| Fossil Collecting..... | 72 |
| Standardized Test Preparation 17..... | 74 |

Lesson 18

| | |
|--|----|
| Number Sequences | 75 |
| <i>Drawing a Diagram</i> 2 Problems..... | 76 |
| Standardized Test Preparation 18..... | 77 |

Lesson 19

| | |
|---------------------------------------|----|
| Unknown Number..... | 78 |
| The Planets | 79 |
| Standardized Test Preparation 19..... | 81 |

Lesson 20

| | |
|--|----|
| Word Problems with Missing Numbers | 82 |
| <i>Drawing a Diagram</i> 2 Group Problems..... | 83 |
| Standardized Test Preparation 20..... | 84 |

Lesson 21

| | |
|---------------------------------------|----|
| Classroom Measures | 85 |
| Looking for a Pattern 2..... | 86 |
| Standardized Test Preparation 21..... | 87 |

Lesson 22

| | |
|---------------------------------------|----|
| Finding the Time..... | 88 |
| Strawberry Farming..... | 90 |
| Standardized Test Preparation 22..... | 92 |

Lesson 23

| | |
|--|----|
| Two-Dimensional Shapes..... | 93 |
| Shape Characteristics | 94 |
| <i>Looking for a Pattern</i> 2 Problems..... | 95 |
| Standardized Test Preparation 23..... | 96 |

Lesson 24

| | |
|---------------------------------------|-----|
| Sorting Shapes..... | 97 |
| Kite Flying | 99 |
| Standardized Test Preparation 24..... | 101 |

Lesson 25

| | |
|--|-----|
| <i>Looking for a Pattern</i> 2 Group Problems..... | 102 |
| Shape Memory Cards | 103 |
| Standardized Test Preparation 25..... | 105 |

Lesson 26

| | |
|---|-----|
| Probability..... | 106 |
| My Day | 107 |
| Acting It Out or Using Concrete Materials 2..... | 108 |
| Standardized Test Preparation 26..... | 109 |

Lesson 27

| | |
|---------------------------------------|-----|
| Testing Probability | 110 |
| Spin, Spin, Spin! | 111 |
| Play Ball..... | 113 |
| Standardized Test Preparation 27..... | 115 |

Lesson 28

| | |
|--|-----|
| Socks..... | 116 |
| Shirt Color Recording Sheet..... | 117 |
| My Bar Graph..... | 118 |
| <i>Acting It Out or Using Concrete Materials</i> 2 Problems..... | 119 |
| Standardized Test Preparation 28..... | 120 |

Lesson 29

| | |
|---------------------------------------|-----|
| Crazy Clown Cards..... | 121 |
| Venn Diagram Clowns | 123 |
| It's Show Time!..... | 124 |
| Standardized Test Preparation 29..... | 126 |

Lesson 30

| | |
|--|-----|
| Ice Cream Pictograph | 127 |
| Favorite Toppings Table | 128 |
| Toppings | 129 |
| <i>Acting It Out or Using Concrete Materials</i> 2 Group Problems..... | 130 |
| Standardized Test Preparation 30..... | 131 |

Appendix A: Games Directions

Appendix B: Hundred Chart

Appendix C: Glossary

Appendix D: Answer Key.....

目 录

Lesson 17

| | |
|----------------|----|
| 找规律..... | 71 |
| 收集化石..... | 72 |
| 标准考前测试 17..... | 74 |

Lesson 18

| | |
|----------------|----|
| 数列..... | 75 |
| 图解法 2 练习..... | 76 |
| 标准考前测试 18..... | 77 |

Lesson 19

| | |
|----------------|----|
| 未知数..... | 78 |
| 星球..... | 79 |
| 标准考前测试 19..... | 81 |

Lesson 20

| | |
|-----------------|----|
| 减法应用题..... | 82 |
| 图解法 2 分组练习..... | 83 |
| 标准考前测试 20..... | 84 |

Lesson 21

| | |
|----------------|----|
| 教室里的测量..... | 85 |
| 找规律 2..... | 86 |
| 标准考前测试 21..... | 87 |

Lesson 22

| | |
|----------------|----|
| 看钟表查时间..... | 88 |
| 采草莓..... | 90 |
| 标准考前测试 22..... | 92 |

Lesson 23

| | |
|----------------|----|
| 平面形状..... | 93 |
| 形状的特点..... | 94 |
| 找规律 2 练习..... | 95 |
| 标准考前测试 23..... | 96 |

Lesson 24

| | |
|----------------|-----|
| 形状的分类..... | 97 |
| 放风筝..... | 99 |
| 标准考前测试 24..... | 101 |

Lesson 25

| | |
|-----------------|-----|
| 找规律 2 分组练习..... | 102 |
| 形状记忆力卡片..... | 103 |
| 标准考前测试 25..... | 105 |

Lesson 26

| | |
|-----------------|-----|
| 可能性(概率)..... | 106 |
| 我的一天..... | 107 |
| 演示或用小玩具解题2..... | 108 |
| 标准考前测试 26..... | 109 |

Lesson 27

| | |
|----------------|-----|
| 测试可能性(概率)..... | 110 |
| 转转转!..... | 111 |
| 打棒球..... | 113 |
| 标准考前测试 27..... | 115 |

Lesson 28

| | |
|---------------------|-----|
| 袜子..... | 116 |
| 衬衣颜色记录表..... | 117 |
| 条形图..... | 118 |
| 演示或用小玩具解题 2 练习..... | 119 |
| 标准考前测试 28..... | 120 |

Lesson 29

| | |
|----------------|-----|
| 疯狂小丑卡片..... | 121 |
| 文氏图分小丑..... | 123 |
| 表演时间到!..... | 124 |
| 标准考前测试 29..... | 126 |

Lesson 30

| | |
|-----------------------|-----|
| 冰淇淋统计图..... | 127 |
| 最喜欢的配料统计表..... | 128 |
| 配料..... | 129 |
| 演示或用小玩具解题 2 分组练习..... | 130 |
| 标准考前测试 30..... | 131 |

| | |
|----------------|-----|
| 附录A: 游戏指南..... | 132 |
|----------------|-----|

| | |
|------------------|-----|
| 附录B: 百以内数字表..... | 136 |
|------------------|-----|

| | |
|---------------|-----|
| 附录C: 词汇表..... | 137 |
|---------------|-----|

| | |
|----------------|-----|
| 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 math. 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 ideas, skills, and words 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 adding, subtracting, and problem solving.

Please sign the bottom of this letter. Signing will show that you are ready to learn and have fun!

Student Signature (学生签名)

Diagnostic Test

摸底测试

1 5 tens + 4 ones = _____

- (A) 45
- (B) 9
- (C) 54
- (D) 45

4 Which number is the greatest?

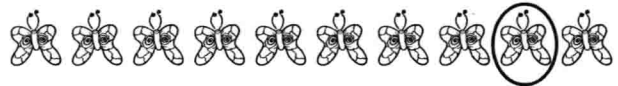
57 75 63 38

- (F) 75
- (G) 63
- (H) 57
- (J) 38

2 Which two-digit number (两位数) CANNOT be made using the numbers 4, 7, and 9?

- (F) 45
- (G) 79
- (H) 94
- (J) 49

5 Which picture is circled (画圈)?



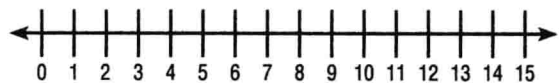
- (A) ninth
- (B) tenth
- (C) eighth
- (D) seventh

3 Put these numbers in order from least to greatest (从小到大顺序排列).

12 11 23 21

- (A) 11, 12, 21, 23
- (B) 12, 11, 21, 23
- (C) 11, 21, 12, 23
- (D) 12, 21, 11, 23

6 Use the number line to solve.
 $5 + 8 =$ _____



- (F) 12
- (G) 14
- (H) 13
- (J) 15

Diagnostic Test (cont.)

- 7** Yi picked 15 flowers. She gave 8 flowers to her mom. How many flowers does she have left?

Which number sentence (数字算式) is used to solve this problem?

- (A) $15 + 8 = 23$
 (B) $15 - 8 = 7$
 (C) $15 - 5 = 10$
 (D) $15 + 7 = 8$

- 10** Solve.

$$8 + 6 - 3 = \underline{\quad}$$

- (F) 14
 (G) 17
 (H) 3
 (J) 11

- 8** Use the number line to solve.
 $22 - 4 = \underline{\quad}$



- (F) 17 (H) 19
 (G) 18 (J) 16

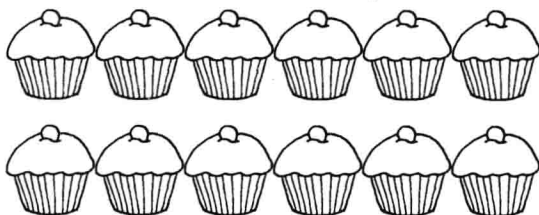
- 11** Which number completes the fact family (数字算式)?

$$6 + 5 = 11 \quad 5 + 6 = 11$$

$$11 - 5 = 6 \quad 11 - \underline{\quad} = 5$$

- (A) 6
 (B) 5
 (C) 11
 (D) 16

- 9** If Bill eats 3 cupcakes from his batch (批), how many are left?



- (A) 10 (C) 8
 (B) 9 (D) 7

- 12** Which shows the number 12?

- (F) eleven
 (G) $10 + 5$
 (H) 1 ten and 2 ones
 (J) $15 - 2$

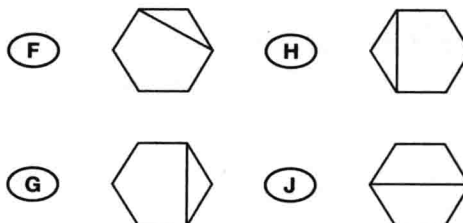
Diagnostic Test (cont.)

- 13** What is the missing number in the sequence (数列)?

12, 14, 16, ____, 20, 22

- (A) 18
- (B) 19
- (C) 21
- (D) 17

- 16** Which shape is divided into equal parts? 哪个图形是等分的?



- 14** What is the missing number in the sequence?

55, 60, 65, ____, 75, 80, 85

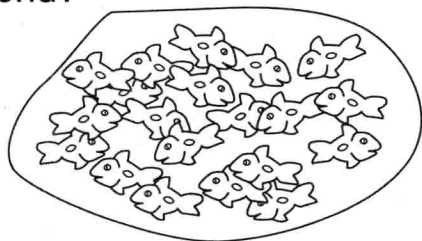
- (F) 66
- (G) 70
- (H) 73
- (J) 68

- 17** What is the next shape in the pattern?



- (A) a square
- (B) a circle
- (C) a triangle
- (D) a rectangle

- 15** What is the best estimate (估计数) for the number of fish in the pond?



- (A) 2 fish
- (B) 20 fish
- (C) 80 fish
- (D) 100 fish

- 18** What number comes next?

30, 40, 50, 60, ____

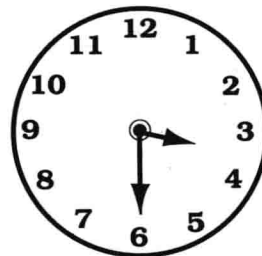
- (F) 75
- (G) 72
- (H) 70
- (J) 80

Diagnostic Test (cont.)

19 $18 - \underline{\quad} = 12$

- (A) 7
- (B) 9
- (C) 6
- (D) 5

22 What time is it?

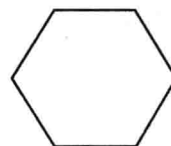


- (F) 3:30
- (H) 4:30
- (G) 2:30
- (J) 5:30

20 Shen had 14 toy cars. He gave some to his brother. Now he has 10 toy cars. How many did he give to his brother?

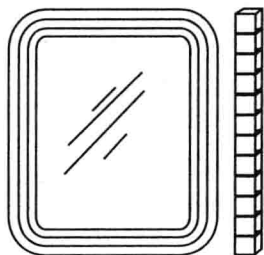
- (F) 1 toy car
- (G) 4 toy cars
- (H) 5 toy cars
- (J) 3 toy cars

23 What is this shape called?



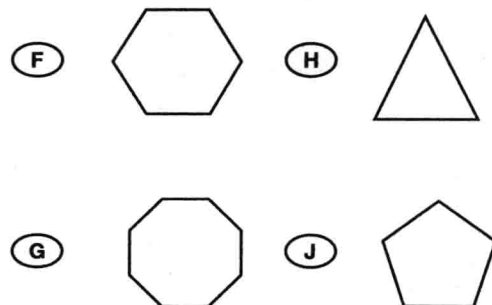
- (A) pentagon (五边形)
- (B) octagon (八边形)
- (C) hexagon (六边形)
- (D) rectangle (四边形)

21 How tall is the picture frame (相框)?



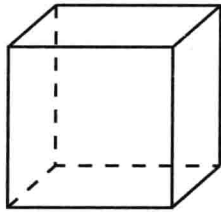
- (A) 40 cubes
- (B) 5 cubes
- (C) 30 cubes
- (D) 12 cubes

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



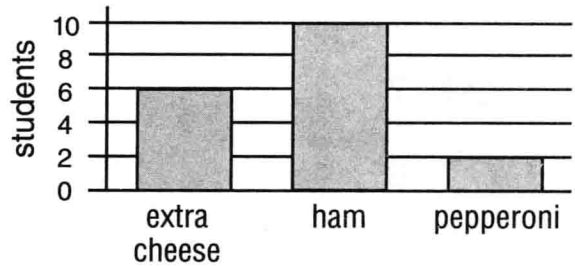
Diagnostic Test (cont.)

- 25** How many corners does a cube have?



- (A) 4 corners (C) 6 corners
(B) 8 corners (D) 7 corners

- 28** How many students wanted extra cheese on their pizzas?



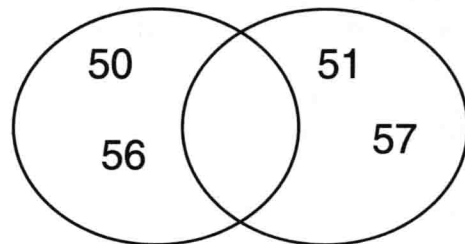
- (F) 2 students (H) 3 students
(G) 6 students (J) 10 students

- 26** What is the probability that lollipops will fall from the sky tonight?

- (F) impossible
(G) unlikely
(H) certain
(J) likely

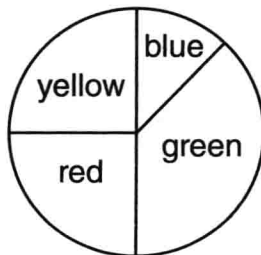
- 29** Which number belongs in the even circle?

Even (偶数) Odd (奇数)



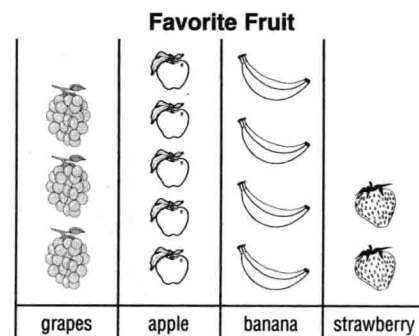
- (A) 54 (C) 53
(B) 55 (D) 59

- 27** Which color on the spinner (旋转片) are you least likely to land?



- (A) red (C) blue
(B) yellow (D) green

- 30** Which fruit is the favorite?



- (F) grapes (H) strawberry
(G) banana (J) apple



Lesson 1

Tens and Ones

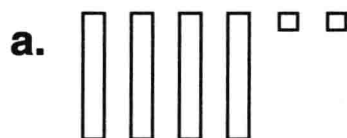
十位数和个位数

Directions: Read how many tens and ones. Write each number.

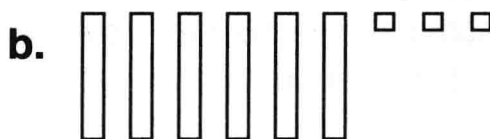
- | | |
|------------------------|-------------------------|
| 1. 2 tens 6 ones _____ | 6. 9 tens 2 ones _____ |
| 2. 5 tens 4 ones _____ | 7. 7 tens 5 ones _____ |
| 3. 3 tens 1 one _____ | 8. 1 ten 6 ones _____ |
| 4. 8 tens 4 ones _____ | 9. 4 tens 9 ones _____ |
| 5. 6 tens 8 ones _____ | 10. 4 tens 7 ones _____ |

Directions: Draw a line to match (连线) the words with the tens  and ones .

11. 5 tens 2 ones



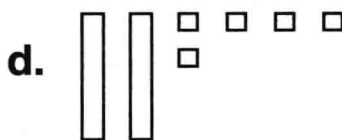
12. 3 tens 1 one



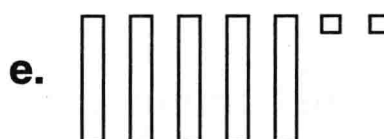
13. 7 tens 9 ones



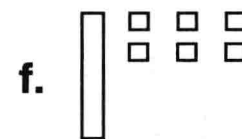
14. 2 tens 5 ones



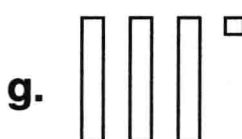
15. 6 tens 3 ones



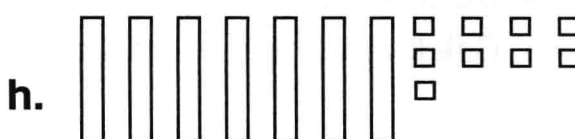
16. 4 tens 8 ones



17. 1 ten 6 ones



18. 4 tens 2 ones



Acting It Out or Using Concrete Materials 1

演示或用小玩具解题1

Sometimes acting out a problem will help find the solution. It is a fun way to see what is happening in the problem.

Counters and objects can be a big help, too! They can be moved through the steps of a problem. This helps you keep track of what is happening as you solve it.

Read below to learn about how to use objects to solve problems. Read below to learn about when to act out problems.

Using Concrete Materials Problem: Animal Crackers

(动物饼干)

The Problem

Caleb had 15 animal crackers. He ate some and had 6 left. How many animal crackers did Caleb eat?

Understanding the Problem

- *What do I know?*
Caleb had 15 animal crackers.
He ate some and had 6 left.
- *What do I need to find out?*
How many animal crackers Caleb ate.

Planning and Communicating a Solution

Use counters or objects to find the answer. Place 15 counters in front of you. Take counters away until you have 6 left. Count how many you took away.

- *Do you see the answer?*
Caleb ate 9 animal crackers.

Acting It Out! Problem: Folding Paper

(折纸)

The Problem

Ming is making a picture. She folds a piece of paper in half. Then she folds it in half again. How many rectangles can she draw pictures in?

Understanding The Problem

- *What do I know?*
Ming folds a paper in half 2 times.
- *What do I need to find out?*
How many rectangles there are.

Planning and Communicating a Solution

Use a piece of paper to act out the answer. Fold the paper in half. Fold the paper in half again. Now, unfold the paper. Count the rectangles.

- *Do you see the answer?*
There are 4 rectangles.

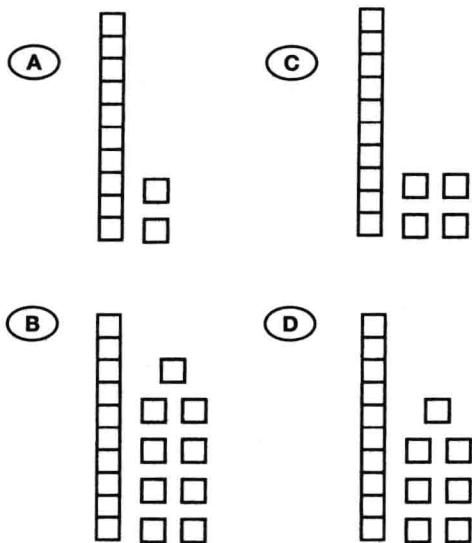
Reflecting and Generalizing

Using these strategies helps find the answers more easily.

Standardized Test Preparation 1

标准考前测试 1

1 Which picture shows 19?



2 Which fish is circled?



- (F) fourth
- (G) fifth
- (H) sixth
- (J) seventh

3 Tell how you got the answer to number one.

说说你是怎么解出第一题答案的。
