

FOR THE STUDENT

Comprehensive Assessment of Mathematics Strategies (CAMS Series) is a maths program that gives you practice with 12 maths strategies. In *Comprehensive Assessment of Mathematics Strategies, Book 4*, you will complete ten maths lessons. Each lesson has a maths theme and 12 questions about the theme. Each question provides you with practice of a particular maths strategy. After you have finished the first five lessons, you will complete a self-assessment. The self-assessment will help you determine how well you are doing and what goals you need to set to improve our maths skills. After you finish the last five lessons, you will complete another self-assessment. This self-assessment will help you determine how well you met your goals. *Comprehensive Assessment of Mathematics Strategies, Book 4* can help you become a better problem solver. You will come to understand the important information you must look for as you prepare to solve any and all problems.

This *Comprehensive Assessment of Mathematics Strategies* book was prepared for students by Robert G. Forest.

Illustrations by Susan Hawk (top, pages 2, 4, 8, 11, 14, 17, 20, 23, 26, 29, 31; bottom, page 5)

LESSON 1

Chen Lu and the Australia Day parade

Chen Lu is a student at the Adams Primary School. She is a member of the Girl Scouts and her troop marched in the Australia Day parade. There were 37 marching groups and 2 dozen floats in the parade. Now do numbers 1 to 12.



1. The number 347 represents the total number of marchers in the parade. Which of these is true about the number 347?

- (A) 347 is the same as 2 hundreds, 40 tens and 7 ones
- (B) 347 is the same as 2 hundreds, 13 tens and 17 ones
- (C) 347 is the same as 3 hundreds, 14 tens and 7 ones
- (D) 347 is the same as 3 hundreds, 4 tens and 17 ones

3. There are several Girl Scout troops in town. Three groups marched in the Australia Day parade. Troop A had 21 Girl Scouts, Troop B had 26 Girl Scouts and Troop C had 33 Girl Scouts. How many Girl Scouts marched in the parade?

- (A) 78
- (B) 72
- (C) 80
- (D) 84

2. The parade route was $2\frac{1}{2}$ kilometres from beginning to end. Chen Lu estimated the number of metres that she marched. Which of these is the correct estimation to the nearest thousand metres?

1 kilometre = 1000 metres

- (A) 1500 metres
- (B) 2000 metres
- (C) 2500 metres
- (D) 3000 metres

4. There were 2 dozen floats in the parade and $\frac{1}{4}$ of the floats were decorated with fresh flowers. How many floats were not decorated with flowers?

- (A) 4 floats
- (B) 18 floats
- (C) 12 floats
- (D) 20 floats

5. There were 37 marching groups in the parade. After every 7th group, 3 clowns performed. What is the total number of clowns that performed?

- Ⓐ 15 clowns
- Ⓑ 12 clowns
- Ⓒ 18 clowns
- Ⓓ 21 clowns

7. Each Girl Scout in Chen Lu's troop paid a \$4.35 fee to hire a private bus to carry them to the parade starting zone and back from the ending zone. Which of these money combinations might Chen Lu have paid for her fee?

- Ⓐ 7 50-c pieces, 5 20-c pieces and 1 5-c piece
- Ⓑ 1 2-dollar coin, 4 50-c pieces and 10 5-c pieces
- Ⓒ 2 2-dollar coins, 2 10-c pieces and 3 5-c pieces
- Ⓓ 3 1-dollar coins, 10 20-c pieces and 5 10-c pieces



6. Chen Lu's mother watched the parade. She saw 3 marching bands and counted 39 brass instruments. If each band had the same number of brass instruments, how many did each band have?

- Ⓐ 11 brass instruments
- Ⓑ 16 brass instruments
- Ⓒ 13 brass instruments
- Ⓓ 19 brass instruments



8. The juggler juggled 5 balls for the entire length of the parade, with few pauses. If she performed while she marched $2\frac{1}{2}$ kilometres, for about how many centimetres did she perform?

1 kilometre = 100,000 centimetres

- Ⓐ 200,000 centimetres
- Ⓑ 150,000 centimetres
- Ⓒ 100,000 centimetres
- Ⓓ 250,000 centimetres

9. Flags from several nations were carried in the parade. Chen Lu wrote the number puzzle for her classmates so that they could find the number of flags. If the value of \square is the number of flags, how many flags were carried in the parade?

$$48 \div \triangle = 8$$

$$22 - \square = \triangle$$

$$\square = \underline{\hspace{2cm}}$$

- (A) 20 flags
- (B) 16 flags
- (C) 18 flags
- (D) 14 flags

11. There were 3 school bands in the parade. The average number of members in each band was 63. If Band A had 59 members and Band B had 68 members, how many members did Band C have?

- (A) 67 members
- (B) 62 members
- (C) 65 members
- (D) 69 members

10. While watching the parade, Chen Lu's brother saw that a performer dropped a pyramid. What is the number of the pyramid?

- (A) 5
- (B) 3
- (C) 4
- (D) 2



12. The Australia Day parade has been held 4 times in 13 years. The chart tells the number of groups that marched each year. In which year did 25 groups march?

Year	Number of groups
1	
5	
9	
13	

- (A) year 1
- (B) year 9
- (C) year 13
- (D) year 5

LESSON 2

Hugh learns about diamonds

Hugh and his classmates are learning about rocks and minerals. Hugh is writing a report on the mining and uses of diamonds. He learned that the major diamond-producing regions are in Australia, South Africa and Russia. Though diamonds are popular for jewellery, Hugh learned that diamonds also have important industrial uses. Now do numbers 1 to 12.



1. The Cullinan diamond was found in South Africa in 1905. It was the largest single rough diamond ever found and weighed 3106 carats. In the number 3106, which digit did Hugh correctly determine to be in the tens place?

- (A) 3
- (B) 1
- (C) 0
- (D) 6

3. A local jeweller named Loretta showed Hugh two trays of diamond rings. Tray 1 had the number of rings shown below. Tray 2 had twice the number of rings that were in tray 1. How many rings did Hugh see?



- (A) 32 rings
- (B) 28 rings
- (C) 21 rings
- (D) 42 rings

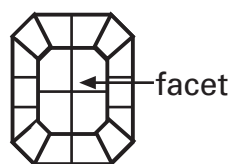
2. You will need information from problem 1 to solve this problem. Hugh must figure out the weight of the Cullinan diamond rounded to the nearest hundred carats. Which of these is the correct estimation?

- (A) 3000 carats
- (B) 3100 carats
- (C) 3200 carats
- (D) 3110 carats

4. Loretta showed Hugh a black velvet bag that contained 217 small diamonds. She removed a handful of diamonds from the bag. The handful amounted to 39 diamonds. How many diamonds remained in the bag?

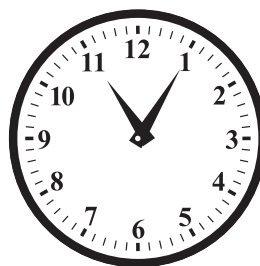
- (A) 198 diamonds
- (B) 178 diamonds
- (C) 176 diamonds
- (D) 256 diamonds

5. Loretta showed Hugh 24 diamonds and each diamond had a total of 18 facets. What is the total number of facets on the 24 diamonds?

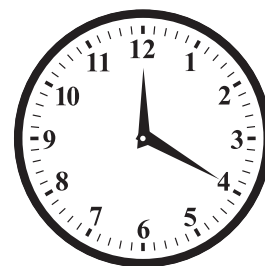


- (A) 432 facets
- (B) 288 facets
- (C) 384 facets
- (D) 576 facets

7. Hugh arrived at and departed from the jewellery shop at the times shown on the clocks. For how many minutes did Hugh visit the jewellery shop?



Arrived



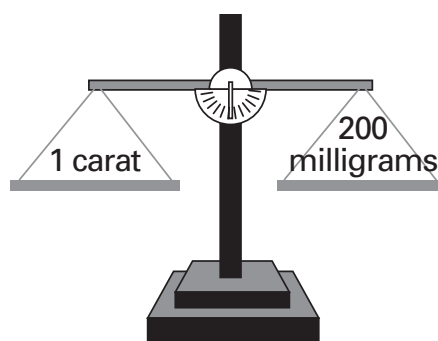
Departed

- (A) 65 minutes
- (B) 70 minutes
- (C) 75 minutes
- (D) 80 minutes

6. Hugh looked at a group of tennis bracelets on display in one of Loretta's jewellery cases. Each bracelet contained 8 diamonds, for a total of 128 diamonds. How many bracelets did Hugh see?

- (A) 12 bracelets
- (B) 14 bracelets
- (C) 18 bracelets
- (D) 16 bracelets

8. Hugh studied the scale. Then he figured out the number of milligrams in 10 carats. He knows that there are 1000 milligrams in a gram and he figured out the number of grams in 10 carats. What was his correct solution?



- (A) 15 grams
- (B) 5 grams
- (C) 2 grams
- (D) 20 grams