

FOR THE STUDENT

Comprehensive Assessment of Mathematics Strategies II (CAMS Series II)

is an assessment program that gives you practice with 12 maths strategies.

In ***Comprehensive Assessment of Mathematics Strategies II, Book 7***, you will complete five maths lessons. Each lesson has a maths theme and 12 questions about the theme. Each question helps you practise a particular maths strategy. After you have finished the five lessons, complete the self-assessment. The self-assessment will help you determine how well you met your goals to improve your maths skills.

Comprehensive Assessment of Mathematics Strategies II, Book 5 can help you become a better problem-solver. You will come to understand the important information you must look for as you solve any and all problems.

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

Illustrations by Susan Hawk.

LESSON 1

Raymond cleans up

Raymond and several of his friends joined the community Clean and Green Committee. They volunteered four Saturdays to help clean up littered areas in their city. Last Saturday, they were assigned to clean up the local park and playground near their homes. Now do numbers 1 to 12.



1. Raymond studied the plaque on a wall in the park. According to the plaque, the original park was founded 256 years ago. Which of these expresses this number in exponential notation?

- (A) $3^3 \times 3^3$
- (B) 6^4
- (C) $4^2 \times 4^2$
- (D) 8^3

3. Raymond used a large plastic bag to remove the debris from one area. $\frac{1}{4}$ of the bag was filled with paper litter, and $\frac{1}{3}$ of the bag was filled with discarded bottles and cans. What fraction of the bag did Raymond fill?

- (A) $\frac{1}{2}$ of the bag
- (B) $\frac{7}{12}$ of the bag
- (C) $\frac{5}{6}$ of the bag
- (D) $\frac{2}{7}$ of the bag

2. The park and playground together are about 186 metres long and 121 metres wide. Raymond correctly estimated the area, expressing the answer to the nearest ten thousand metres. What was Raymond's estimate?

- (A) 20,000 m²
- (B) 18,000 m²
- (C) 19,000 m²
- (D) 21,000 m²

4. Raymond promised to work 32 hours over four Saturdays. If Raymond worked $7\frac{5}{6}$ hours on the first Saturday and $5\frac{2}{3}$ hours on the second Saturday, how many hours must he work over the next two Saturdays to fulfil his promise?

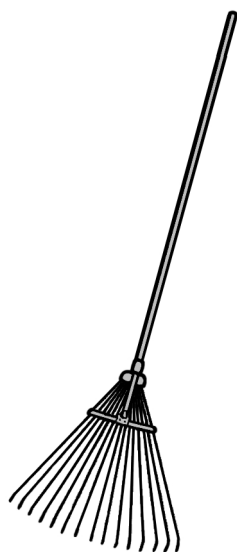
- (A) $17\frac{3}{4}$ hours
- (B) $18\frac{1}{6}$ hours
- (C) $17\frac{2}{3}$ hours
- (D) $18\frac{1}{2}$ hours

5. You will need information from problem 4 to solve this problem.
Raymond's friend Carlos volunteered to work $1\frac{5}{8}$ times the number of hours that Raymond volunteered. How many hours did Carlos volunteer to work?
- (A) 52 hours
 - (B) 48 hours
 - (C) 56 hours
 - (D) 40 hours

7. The rubbish truck that took away a full load of debris left the park at 1.32 p.m. and returned to the park at 2.41 p.m. How many minutes was the truck away from the park?
- (A) 109 minutes
 - (B) 63 minutes
 - (C) 53 minutes
 - (D) 69 minutes

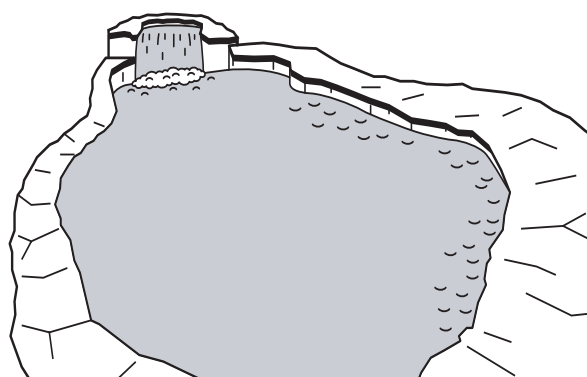
6. Raymond and 2 friends can rake and clean up a grassy area in $2\frac{1}{2}$ hours.
If the same ratio of people and time applies, how many hours of work can 8 people do?

- (A) $4\frac{1}{2}$ hours
- (B) $5\frac{3}{8}$ hours
- (C) $6\frac{2}{3}$ hours
- (D) $7\frac{1}{4}$ hours



8. Raymond estimated that the pond in the park held 3780 litres of water. What is this in millilitres?

- (A) 37,800 mL
- (B) 3780 mL
- (C) 3,780,000 mL
- (D) 378,000 mL

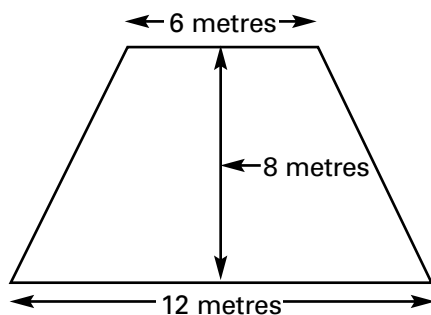


9. Raymond and Carlos arranged bricks to form a walkway. The pattern is charted below. If the pattern continues, how many bricks will they place in the tenth row?

Row	Number of bricks
Row 1	2
Row 2	6
Row 3	10

- (A) 26 bricks
 (B) 38 bricks
 (C) 34 bricks
 (D) 22 bricks

10. Raymond and Carlos resealed the asphalt in a games court illustrated below. What is the area of the court?



$$\text{Area of trapezoid} = \frac{1}{2}h(b_1 + b_2)$$

- (A) 108 m^2 (C) 96 m^2
 (B) 84 m^2 (D) 72 m^2

11. Raymond averaged 8 hours of work each of the 4 Saturdays. Raymond charted the actual hours of work he put in each Saturday. How many hours did Raymond work on the last Saturday?

Saturday	Hours
1	$7\frac{5}{6}$
2	$5\frac{2}{3}$
3	$10\frac{3}{4}$
4	

- (A) $10\frac{2}{3}$ hours (C) $7\frac{3}{4}$ hours
 (B) $8\frac{1}{4}$ hours (D) $13\frac{1}{2}$ hours

12. When the clean-up program was finished, a celebration supper was held for the volunteers at the community centre. The chart below shows the menu selections of the volunteers. What percentage of the volunteers selected ravioli? Express your answer to the nearest percentage.

Menu	Number
Spaghetti and meatballs	IIII IIII IIII IIII
Spaghetti and meatless tomato sauce	IIII IIII II
Ravioli	IIII IIII
Lasagna	IIII IIII IIII IIII

- (A) 15% (C) 32%
 (B) 33% (D) 20%

LESSON 2

Fiona's paper sculptures

Fiona enjoys working with cut paper and creating origami. She has made several beautiful paper sculptures with bright colours of paper. She uses some sculptures to create mobiles. She lets others stand alone to form vivid displays. Fiona gives most of her creations to friends and family as gifts. Now do numbers 1 to 12.



1. Fiona created a floral centrepiece of coloured paper for a family get-together. The number of flowers she made is the same as the prime number that appears in the box. What is the number of flowers?

9, 51, 27, 11, 39

- (A) 9 flowers
- (B) 27 flowers
- (C) 11 flowers
- (D) 39 flowers

3. To improve her origami skills, Fiona took a course at the community center. The 8-session course cost \$59.95, and the supplies for the course cost \$32.40. Fiona also paid a workshop fee of \$4.50 per session. If Fiona attended all the sessions, what was her total cost for the course?

- (A) \$96.85
- (B) \$108.30
- (C) \$128.35
- (D) \$160.70

2. Coloured paper comes in packages of 150 sheets. Fiona used 22% of the sheets to create paper birds for a spring display at school. Estimate the number of sheets she used.

- (A) about 30 sheets
- (B) about 40 sheets
- (C) about 20 sheets
- (D) about 50 sheets

4. Fiona bought some supplies that cost \$47.25. She bought 2 pairs of scissors at \$12.90 a pair, and 4 packets of coloured paper at \$2.40 a packet. She used the remaining money to purchase 3 plastic stencils. What did Fiona pay for each stencil?

- (A) \$9.55
- (B) \$3.95
- (C) \$12.40
- (D) \$11.75

5. Fiona has 12 colours that she most often uses in her paper creations. Which set of numbers includes all the factors of 12?

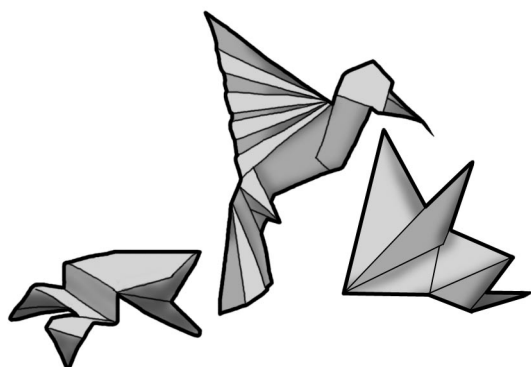
- Ⓐ {1, 2, 3, 6, 9, 12}
- Ⓑ {2, 3, 4, 6, 8, 12}
- Ⓒ {2, 3, 4, 6, 9, 12}
- Ⓓ {1, 2, 3, 4, 6, 12}

7. Fiona saved a total of \$65 to pay for origami supplies. There are 8 notes that make up her savings. She has notes in the following denominations: \$20, \$10 and \$5. How many 5-dollar notes does she have in her savings?

- Ⓐ three 5-dollar notes
- Ⓑ four 5-dollar notes
- Ⓒ two 5-dollar notes
- Ⓓ five 5-dollar notes

6. Fiona made 5 paper sculptures of animals in 8 hours. At this rate, how many animals could she make in 32 hours of work?

- Ⓐ 18 animals
- Ⓑ 20 animals
- Ⓒ 32 animals
- Ⓓ 24 animals



8. To create her paper sculptures, Fiona uses sheets of art paper that are 29.7 centimetres long and 21 centimetres wide. What is the perimeter of one sheet of art paper, measured in millimetres?

- Ⓐ 1014 mm
- Ⓑ 111 mm
- Ⓒ 1392 mm
- Ⓓ 987 mm