

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 6*, 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 6 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.

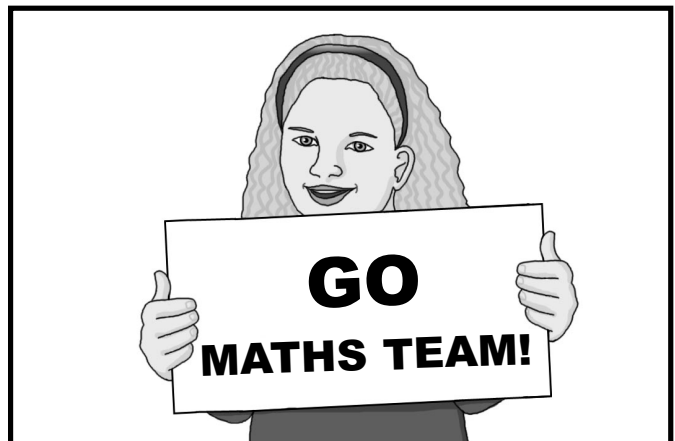
This *Comprehensive Assessment of Mathematics Strategies II* book was prepared for students by Robert G. Forest.

Illustrations by Susan Hawk.

LESSON 1

Beth and the maths team

Beth and other members of her maths team are preparing for next month's State Maths Challenge. Groups of maths students write problems. Mr Grant edits the problems and creates practice sheets of the most challenging of the problems. Twelve of the problems follow. Now do numbers 1 to 12.



1. Which of these numbers has the greatest value?

- (A) 0.5481
- (B) 0.5627
- (C) 0.5632
- (D) 0.5513

3. Mel's parents have kept a record of his growth over the years. They place a mark on the playroom door each time they measure Mel. On 1 October, Mel measured $1\frac{1}{4}$ centimetres more than the previous mark. On 1 March, he measured $1\frac{1}{2}$ centimetres more than the October mark. On 1 August, he measured $1\frac{7}{8}$ centimetres more than the March mark. How many centimetres did Mel grow during this time?

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

2. Paula checked the encyclopedia and found the estimated population of a Kalgoorie to be 25,000 people. Which of these could have been the population number before it was rounded?

- (A) 25,727
- (B) 24,588
- (C) 24,327
- (D) 25,503

4. If $207.2 - n = 176.8$, which of these is the value of n ?

- (A) 21.4
- (B) 30.6
- (C) 30.4
- (D) 31.6

5. Zane can take 24 pictures with each roll of film. Which expression shows how to find the number of pictures he can take with 16 rolls of film?

- (A) $(20 \times 16) + (4 \times 16)$
- (B) $(20 \times 4) + (10 \times 6)$
- (C) $(20 + 4) + (10 + 16)$
- (D) $24(10 \times 6)$

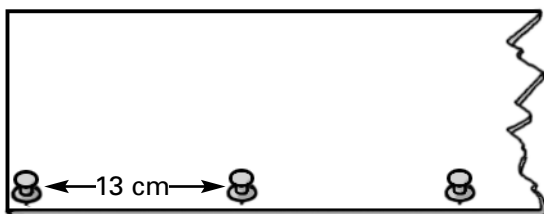


7. On Saturday, Gary worked for 4 hours and 35 minutes designing a physical map for a report on France. On Sunday, Gary spent 3 hours and 52 minutes completing the map. What is the total time Gary spent working on the map?

- (A) 7 hours and 57 minutes
- (B) 8 hours and 13 minutes
- (C) 7 hours and 42 minutes
- (D) 8 hours and 27 minutes

6. Shana had a board 2.6 metres long. She divided the board into 13-centimetre segments and placed a pushpin close to the left edge of the board. The other pushpins were placed at the base of each segment, with the last pin at the right-hand edge. How many pushpins did Shana need?

- (A) 20 pushpins
- (B) 17 pushpins
- (C) 21 pushpins
- (D) 19 pushpins



8. Which measurement would you probably use to determine the weight of a handful of sand?

- (A) tonnes
- (B) milligrams
- (C) grams
- (D) kilograms

9. What is the value of the missing number in the equation?

$$(5 \times 9) - (6 \times \square) = 3$$

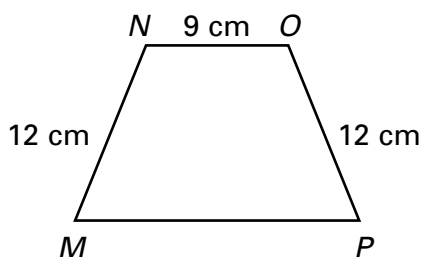
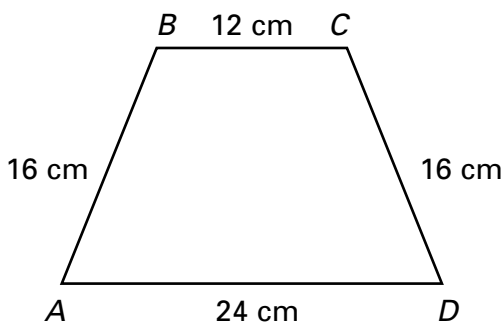
- (A) 4
- (B) 7
- (C) 5
- (D) 1

11. Francine put these apples into a paper bag: 3 granny smith apples, 5 fuji apples, 10 golden delicious apples and 6 pink lady apples. If Francine closes her eyes and reaches into the bag, what are her chances of selecting a pink lady apple?



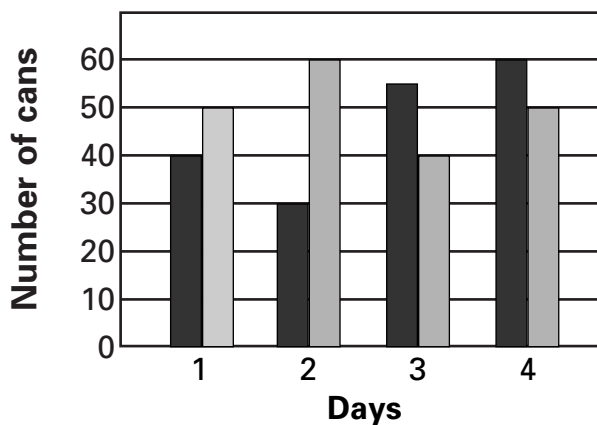
- (A) $\frac{1}{4}$
- (B) $\frac{5}{24}$
- (C) $\frac{5}{12}$
- (D) $\frac{1}{8}$

10. The trapezoids below are similar. What is the perimeter of the smaller trapezoid?



- (A) 68 cm
- (B) 59 cm
- (C) 48 cm
- (D) 51 cm

12. Classes A and B at the Murphy High School are collecting soft-drink cans for recycling. The bar graph below shows the results of 4 days of collecting. On which day were the most cans collected?



■ = Class A ■ = Class B

- (A) Day 1
- (B) Day 2
- (C) Day 3
- (D) Day 4

LESSON 2

Shadow for a day

Arlo wants to be a primary school teacher some day. As part of a careers day, Arlo was invited to visit a year three classroom. He shadowed Ms Clarke, observing all that she did with the children during the school day. Arlo learned a lot about preparing lessons and teaching. Now do numbers 1 to 12.



1. The sizes of the 4 year three classes in the school where Arlo was assigned are: 24 students, 25 students, 23 students and 22 students. Which of the numbers is a prime number?

(A) 24 (C) 23
(B) 25 (D) 22

3. You will need information from problem 2 to solve this problem. After estimating the perimeter of the wall, Arlo determined the actual perimeter. What was his correct finding?

(A) $42\frac{3}{8}$ metres (C) $42\frac{1}{8}$ metres
(B) $43\frac{1}{2}$ metres (D) $43\frac{3}{4}$ metres

2. Arlo is helping the students hang a rectangular map of the world on an empty wall. The wall is $12\frac{3}{4}$ metres long and $9\frac{1}{8}$ metres wide. Arlo estimated the perimeter of the wall to the nearest 10 metres. What was his correct estimate?

(A) 20 metres
(B) 40 metres
(C) 30 metres
(D) 50 metres

4. Arlo created this pattern of numbers to challenge two bright maths students. What operation must the students follow to find the missing number?

$12\frac{1}{8}, 9\frac{7}{8}, \text{---}, 5\frac{3}{8}$

- (A) Subtract $2\frac{1}{4}$ from each preceding number.
(B) Subtract $2\frac{3}{8}$ from each preceding number.
(C) Subtract $2\frac{7}{8}$ from each preceding number.
(D) Multiply each preceding number by $\frac{7}{8}$.

5. There are 23 students in Ms Clarke's class. Arlo made a copy of a 3-page maths test for each student. He also made a copy of a 5-page social-studies article for each student. In total, how many sheets of paper did Arlo need to make the copies?

- (A) 186 sheets
- (B) 172 sheets
- (C) 184 sheets
- (D) 178 sheets

7. Ms Clarke can correct 3 maths tests every 2 minutes. How many maths tests is she likely to correct in $\frac{1}{2}$ hour?

- (A) 50 quizzes
- (B) 45 quizzes
- (C) 40 quizzes
- (D) 35 quizzes

6. You will need information from problem 5 to solve this problem.

During recess, 8 students in Ms Clarke's decided to play soccer. What percentage of the students played soccer? Express your answer to the nearest whole percentage.



- (A) 38%
- (B) 29%
- (C) 33%
- (D) 35%

8. The flagpole in front of Arlo's school is 21.96 metres tall. Arlo converted its height to centimetres. What was his correct finding?

- (A) 2196 centimetres
- (B) 219.6 centimetres
- (C) 2.196 centimetres
- (D) 21960 centimetres