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 8,*** 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. See if you can figure out the maths strategy as you solve the problem. 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 8*** 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

Supermarket shopping spree

Julianne's mother, Mrs Perez, won a $250 shopping spree in a contest sponsored by a local supermarket. After school on Tuesday, Julianne joined her mother to spend the prize money on food and household supplies. Now do numbers 1 to 12.

1. Solve the problem below to find out how many minutes Mrs Perez and Julianne spent in the supermarket.

$$\sqrt{49} \times \sqrt{64} = \square$$

Ⓐ 54 minutes
Ⓑ 48 minutes
Ⓒ 56 minutes
Ⓓ 42 minutes

2. Mrs Perez asked Julianne to estimate the cost per kilogram of 2.8 kilograms of coleslaw sold at a total cost of $11.72. To the nearest dollar, what was Julianne's correct estimate?

Ⓐ $4.00
Ⓑ $2.00
Ⓒ $3.00
Ⓓ $1.00

3. Mrs Perez bought two packets of mincemeat weighing $1\frac{3}{4}$ kilograms and $2\frac{2}{5}$ kilograms. She plans to use the meat for a family barbecue. How many kilograms of mincemeat did she buy?

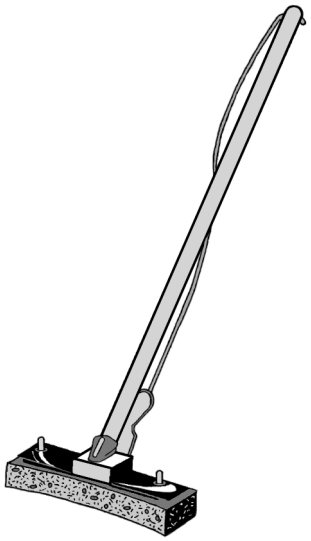
Ⓐ $4\frac{3}{20}$ kilograms
Ⓑ $5\frac{1}{2}$ kilograms
Ⓒ $5\frac{7}{20}$ kilograms
Ⓓ $6\frac{9}{20}$ kilograms

4. Mrs Perez bought 0.865 kilograms of turkey breast and 1.06 kilograms of potato salad for Saturday lunch. How much more potato salad than turkey breast did she buy?

Ⓐ 1.095 kilograms
Ⓑ 1.059 kilograms
Ⓒ 0.915 kilograms
Ⓓ 0.195 kilograms

5. Julianne bought a sponge mop. The original price was $14.95; however, the store was offering a 40% discount for this week only. What was the discounted price of the mop?

Ⓐ $7.26
Ⓑ $8.97
Ⓒ $5.98
Ⓓ $9.02



6. Mrs Perez bought 5 packets of cereal, selling at 3 packets for $5.00. What did she pay for the cereal?

Ⓐ $10.00
Ⓑ $ 8.36
Ⓒ $ 8.33
Ⓓ $ 9.28

7. Julianne worked out that $250 can be divided into 19 notes if you use $20 notes, $10 notes and $5 notes. How many of the 19 notes are $5 notes?

Ⓐ 9 notes
Ⓑ 5 notes
Ⓒ 4 notes
Ⓓ 3 notes

8. A drive to the supermarket from the Perez home is 2.6 kilometres. How many metres did Mrs Perez and Julianne travel to and from the supermarket?

Ⓐ 5200 metres
Ⓑ 520 metres
Ⓒ 130 metres
Ⓓ 2600 metres

9. Mrs Perez will prepare 1 litre of spaghetti sauce for each group of 5 people who attend a family party. If Mrs Perez expects a total of 18 people at the party, including herself and Julianne, how many litres of sauce should she make?

Ⓐ $4\frac{1}{2}$ litres

Ⓑ $3\frac{3}{5}$ litres

Ⓒ $3\frac{2}{3}$ litres

Ⓓ $4\frac{5}{6}$ litres

10. An isosceles triangular mirror, bought by Mrs Perez, has an area of 108 cm^2 and a perimeter of 48 cm. Which of these is a possible measurement for the base of the mirror?

Ⓐ 18 centimetres

Ⓑ 21 centimetres

Ⓒ 16 centimetres

Ⓓ 15 centimetres

11. Julianne bought 12 green capsicums, 8 red capsicums, and 10 yellow capsicums. The shop assistant put the capsicums into one bag at the checkout counter. If Julianne reaches into the bag, without looking, to select 1 capsicum, what is the probability that the capsicum she selects will be red?

Ⓐ $\frac{1}{3}$

Ⓑ $\frac{1}{4}$

Ⓒ $\frac{4}{15}$

Ⓓ $\frac{2}{5}$

12. While Mrs Perez was checking out laundry supplies, Julianne visited the canned-vegetable aisle. She noted the number of cans of 5 kinds of vegetables. Which vegetable represents about 14% of the total cans displayed?

Category	Number of cans
Corn	✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓ ✓✓✓✓✓✓✓✓✓✓✓✓✓
String beans	✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓ ✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓
Peas	✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓ ✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓
Beetroot	✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓
Potatoes	✓✓✓✓✓✓✓✓✓✓✓✓✓

Each symbol = 1 can

Ⓐ potatoes

Ⓑ corn

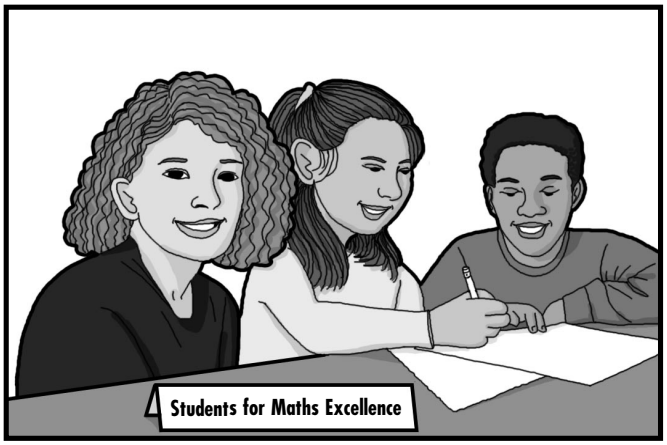
Ⓒ peas

Ⓓ beetroot

LESSON 2

Nelson joins the S.M.E.

Nelson was invited to join S.M.E., Students for Maths Excellence. S.M.E. is a maths club for students at Mayland Secondary College. Nelson and the maths club friends have selected 12 unique problems to challenge fellow S.M.E. members. Now do numbers 1 to 12.



1. The teacher asked the S.M.E. members to find the value of 7 factorial.

$7! = \square$

Ⓐ 120
Ⓑ 720
Ⓒ 5040
Ⓓ 2040

2. There are 192 year 9 students at Mayland Secondary College. About 11% of these students belong to S.M.E. Estimate the number of year 9 students who are members.

Ⓐ 24 students
Ⓑ 18 students
Ⓒ 22 students
Ⓓ 20 students

3. You will need information from problem 2 to solve this problem.

Every year 9 student must take a maths class. If 10% of the students have an A average mark and 38% of the students have a B average, about how many students have a B or better average?

Ⓐ 66 students
Ⓑ 92 students
Ⓒ 53 students
Ⓓ 74 students

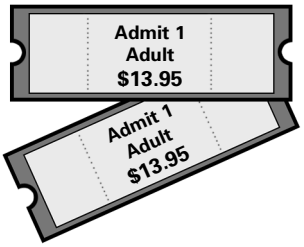
4. What is the value of x in this number sentence?

$$4(x^3) - 2^4 = \frac{184}{2}$$

Ⓐ 4
Ⓑ 27
Ⓒ 3
Ⓓ 6

5. On Friday evening, one theatre at the movie complex sold 264 tickets for the 7.30 p.m. movie. Of the tickets sold, $\frac{2}{3}$ of the customers paid the adult price of $13.95 per ticket, $\frac{1}{6}$ of the customers paid the senior price of $10.50 per ticket, and the remaining customers paid the children's price of $9.10 per ticket. How much money was taken in for the 7.30 p.m. movie?

Ⓐ $3317.60
Ⓑ $3104.30
Ⓒ $3375.50
Ⓓ $3937.20



6. Nelson and several S.M.E. members made a poster to promote maths excellence in the school. The members selected a piece of red art paper 60 centimetres long and cut strips 75 millimetres wide. How many strips did they create to use on the poster?

Ⓐ 4 strips
Ⓑ 0.8 strips
Ⓒ 8 strips
Ⓓ 80 strips

7. Nelson lives in Western Australia. On Saturday, at 10.54 a.m. Western Standard Time, Nelson sent an email message to his cousin Tracy, who lives in Canberra. What was the Eastern Standard Time in Canberra when Nelson sent the email?

Ⓐ 11.54 a.m.
Ⓑ 12.54 p.m.
Ⓒ 1.54 p.m.
Ⓓ 12.54 a.m.

8. Nelson's school has an Explorers' Club who go bushwalking every second Sunday. In summer, the bushwalk is called off if it is too hot. On the last Sunday in November, the temperature was 24°C. The previous bushwalk had been cancelled, as the temperature was 4^2 degrees hotter. What was the temperature on the day the bushwalk was cancelled?

Ⓐ 37°C
Ⓑ 43°C
Ⓒ 38°C
Ⓓ 40°C