



Singa Math Assessment Test 2022

For Grade 5/6

Time: 45 minutes

NAME:

GRADE:

COUNTRY:

INSTRUCTIONS

1. Please **DO NOT OPEN** the contest booklet until the Proctor has given permission.
2. There are 25 questions.
Section A: Questions 1 to 20 score 2 marks each, no points are deducted for unanswered or wrong answer.
Section B: Questions 21 to 25 score 2 marks each, no points are deducted for unanswered or wrong answer.
3. Shade your answers neatly using a 2B pencil in the Answer Entry Sheet.
4. **PROCTORING:** No one may help any student in any way during the contest.
5. No electronic devices capable of storing and displaying visual information is allowed during the course of the exam. Strictly **No Calculators** are allowed into the exam.
6. Students must show detailed working and transfer answers to the Answer Entry Sheet.
7. **No exam papers and written notes can be taken out by any contestant.**

Section A: Multiple Choice Questions (20 x 2 marks = 40 marks)

For questions 1 to 20, choose the correct option and write its number (1, 2, 3 or 4) in the brackets provided. Then shade your option in the Answer Entry Sheet (AES) sheet provided.

1. Using the digits 6, 5, 9, 1 and 4 to form the largest five-digit even number that is divisible by 2 and 4?
 - (1) 15 694
 - (2) 96 514
 - (3) 95 416
 - (4) 94 651

2. Sharon and Rachel spent 15 minutes packing pears into bags. Every minute, Sharon packed 6 more pears than Rachel. They packed a total of 390 pears. How many pears did Rachel pack?
 - (1) 150
 - (2) 192
 - (3) 198
 - (4) 240

3. Joseph had 400 marbles and $\frac{3}{5}$ of them were blue marbles. He gave some blue marbles to his brother. 20% of his remaining marbles are blue marbles. How many blue marbles did he give to his brother?
 - (1) 80
 - (2) 96
 - (3) 200
 - (4) 240

4. Mrs Chee had 8 kg of rice. She used $\frac{1}{2}$ of it and gave $\frac{3}{4}$ kg to her brother. How much rice did she have left?

(1) $3\frac{1}{4}$ kg

(2) $5\frac{5}{8}$ kg

(3) $6\frac{3}{4}$ kg

(4) $7\frac{1}{2}$ kg

5. The table below shows the rate of renting a bicycle at West Coast Park.

| | |
|---|--------|
| First hour | \$4.80 |
| Every additional one hour or part thereof | \$4.50 |

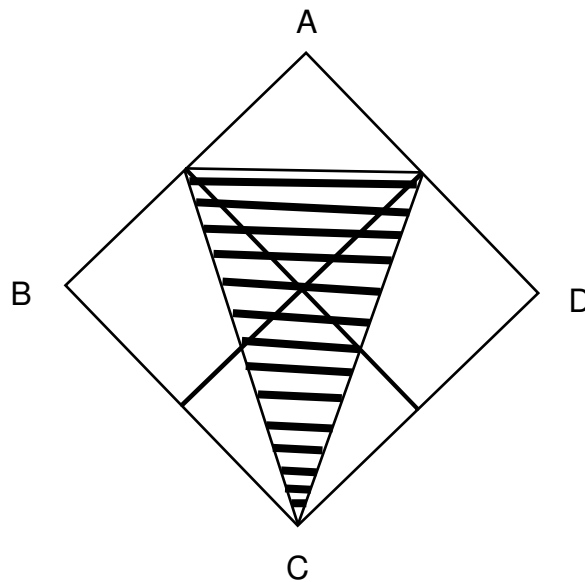
Tim and his two friends hired two bicycles for 2 hours 30 minutes and shared the cost equally. How much did each of them pay?

- (1) \$4.40
(2) \$7.70
(3) \$9.20
(4) \$13.80

6. Lollipops were sold at \$0.95 per 200 g in a shop. Karen bought 1.8 kg of candies. She gave the cashier a \$50-note. How much change will she receive?

- (1) \$8.55
- (2) \$17.10
- (3) \$32.90
- (4) \$41.45

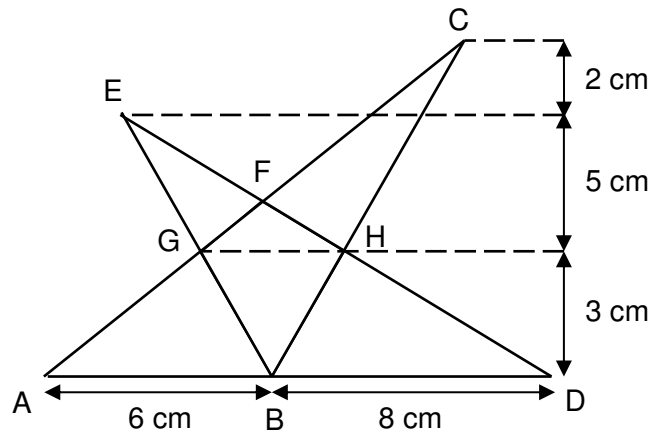
7. The square ABCD below is made up of 4 smaller squares. What is the ratio of the area of shaded part to the area of the unshaded part?



- (1) 8 : 3
- (2) 5 : 8
- (3) 5 : 3
- (4) 3 : 5

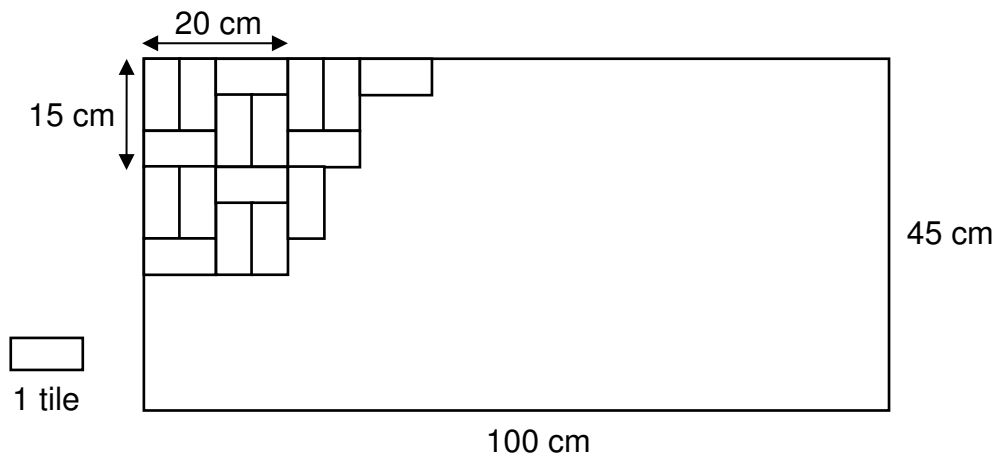
8. At the playground, $\frac{2}{5}$ of the boys is equal to 75% of the girls. What is the ratio of the number of girls to the total number of children?
- (1) 8 : 23
(2) 8 : 15
(3) 15 : 8
(4) 15 : 23
9. After a discount of 20%, the price of a bottle of shampoo was \$16. Ms Wong purchased 2 bottles of shampoo and was given a further discount of \$4 for them. What was the total percentage discount given for the 2 bottles of shampoo?
- (1) 12.5%
(2) 30%
(3) 40%
(4) 45%

10. The figure below, not drawn to scale, is made up of triangles ABC and BED. The shaded region BGFH is 8 cm^2 . Find the area of the unshaded parts.



- (1) 46 cm^2
- (2) 48 cm^2
- (3) 54 cm^2
- (4) 62 cm^2

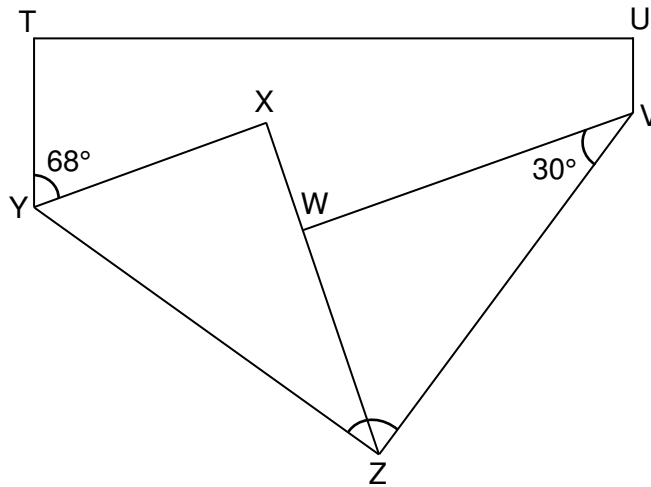
11. Mr Wong covered a rectangular wall measuring 100 cm by 45 cm, with as many identical rectangular tiles as possible, using the tiling pattern shown below.



How many tiles did he use altogether?

- (1) 15
- (2) 16
- (3) 90
- (4) 96

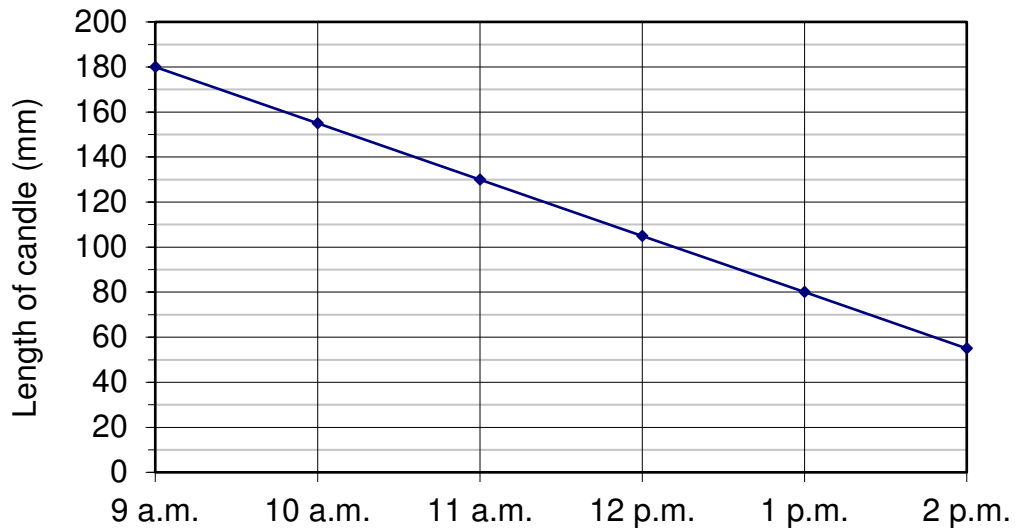
12. A rectangular piece of paper is folded up at two of its corners as shown below.
Find $\angle YZV$.



- (1) 86°
(2) 94°
(3) 98°
(4) 116°
13. A rectangular tank has a base area of 40 cm^2 . It is $\frac{4}{7}$ filled with water to a height of 56 cm. What is the capacity of the rectangular tank?

- (1) 70 cm^3
(2) 1280 cm^3
(3) 2240 cm^3
(4) 3920 cm^3

14. The line graph shows the remaining length of a lit candle over 5 hours.



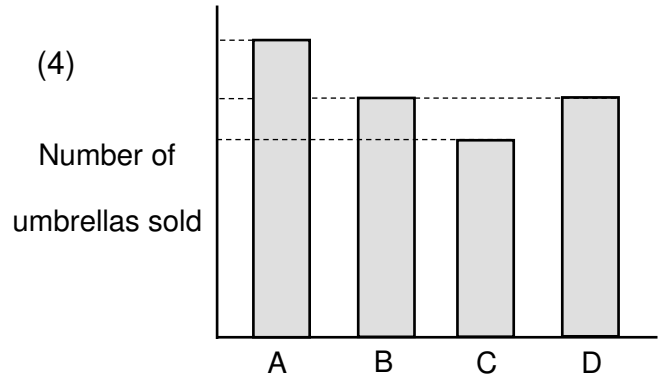
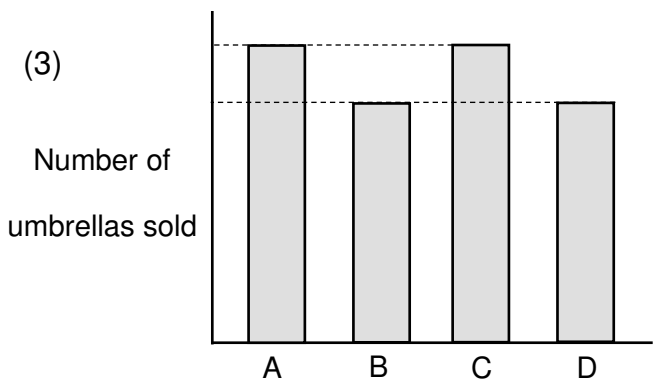
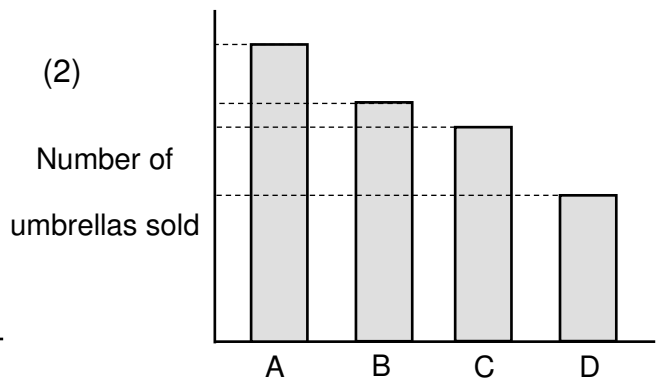
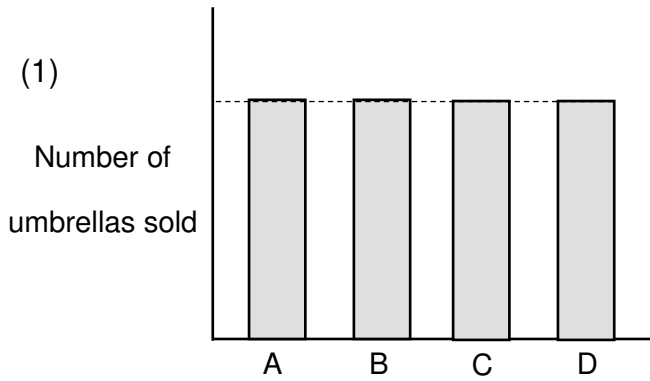
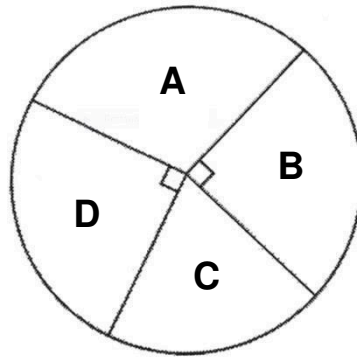
The candle burnt at a constant rate. At what time would the candle be completely burnt out?

- (1) 2.12 p.m.
 - (2) 3.12 p.m.
 - (3) 4.12 p.m.
 - (4) 4.20 p.m.
15. What is the sum of all the terms in the following sequence?

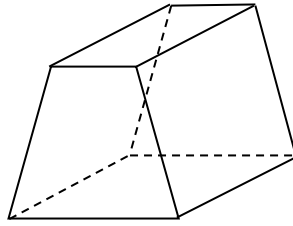
$$h, h + 1, h + 2, \dots, h + 9, h + 10$$

- (1) $5h + 22$
- (2) $10h + 55$
- (3) $11h + 22$
- (4) $11h + 55$

16. The pie chart below shows the number of four types of umbrellas sold by a shop in a week. Which bar graph best represents the information in the pie chart?

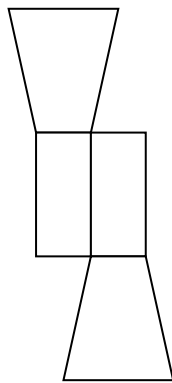


17. The figure below shows a solid.

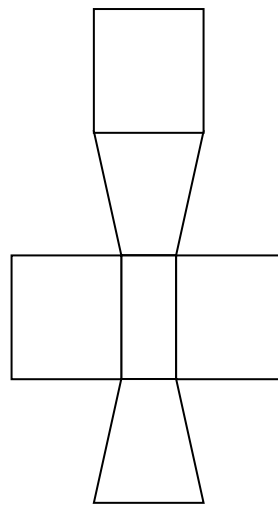


Which of the following is a net of the solid?

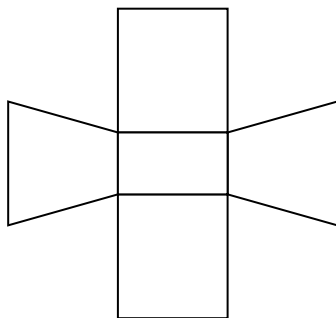
(1)



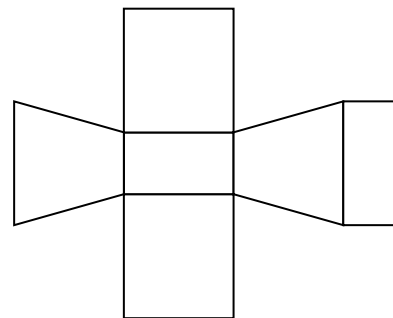
(2)



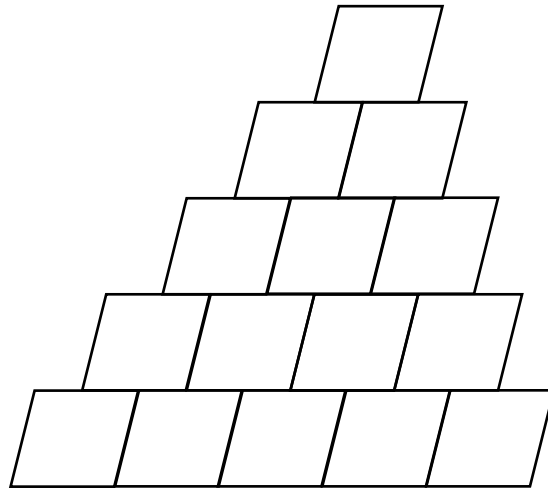
(3)



(4)



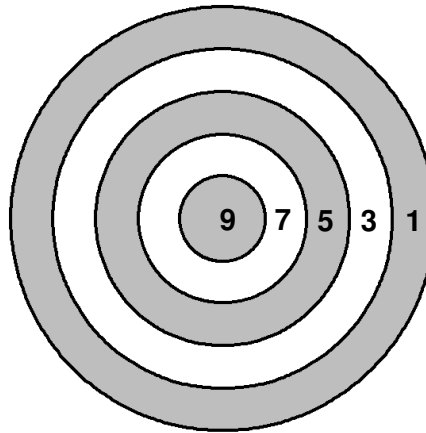
18. Ryan used 55 identical rhombuses to form a pattern. A part of the pattern is shown below.



The perimeter of one rhombus is 40 cm. What is the perimeter of the pattern formed with 55 rhombuses?

- (1) 220 cm
- (2) 310 cm
- (3) 400 cm
- (4) 630 cm

19. A circular board is divided into five regions, each carrying a score of 1, 3, 5, 7 or 9 as shown below. David threw 6 darts and all of them hit the board. Which one of the following could be his total score?



- (1) 47
(2) 50
(3) 51
(4) 53
20. To print a book, 219 digits were required. How many pages were there in the book?

- (1) 107
(2) 108
(3) 109
(4) 110

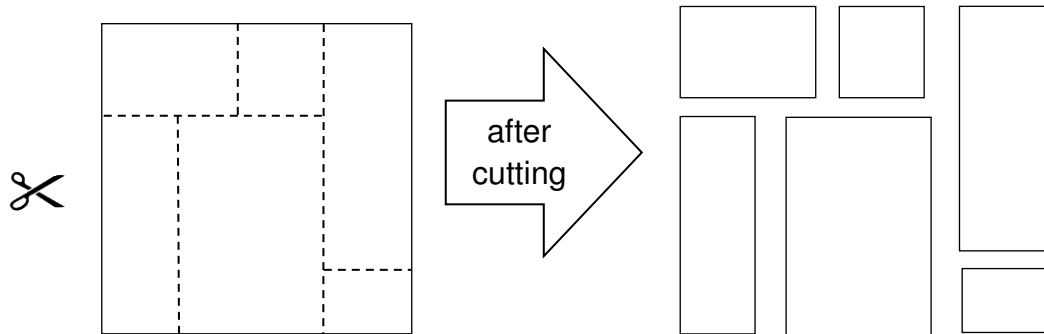
Section B: Open-ended Questions (5 x 2 marks = 10 marks)

Read the questions carefully. For questions 21 to 25, show your working clearly and write your answer in the blank provided. Then write and shade your answer in the Answer Entry Sheet (AES) sheet provided.

21. The area of a rectangle is 1452 cm^2 . The breadth of the rectangle is 0.75 of its length. What is the length of the rectangle?

Answer: _____ cm

22. A square was cut into six individual rectangles as shown below. The total perimeter of the six individual rectangles is 140 cm. What was the area of the square before it was cut?



Answer: _____ cm²

23. A sealed container with the measurements as shown in Figure 1 is filled with 10.2 litres of water. The sealed container is inverted as shown in Figure 2. Find the height of the water in the container from the base of the container.

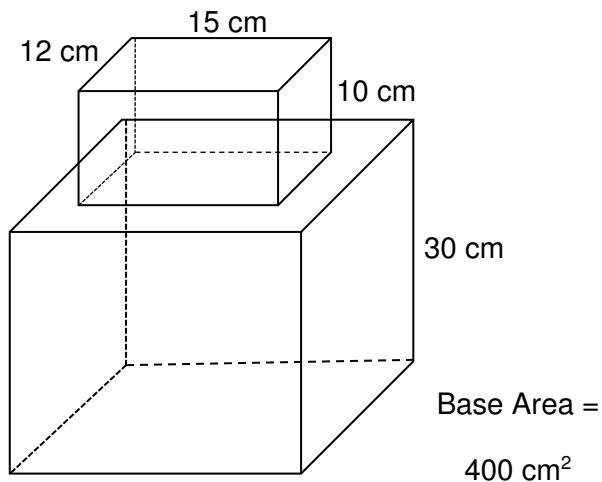


Figure 1

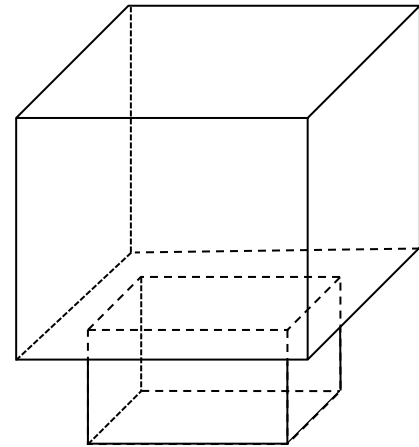


Figure 2

Answer: _____ cm

24. Farmer Wong laid 20 logs over a distance of 168 m. The logs were of 3 different lengths; 6-m logs, 10-m logs and 12-m logs. The first 6 logs were the longest length. How many 6-m logs did Farmer Wong use?

Answer: _____

25. Some numbers are arranged in a certain pattern as shown below.

| Row | Column A | Column B | Column C | Column D | Column E |
|-----|-------------|-------------|-------------|-------------|-------------|
| 1 | 2 | 4 | 6 | 8 | 10 |
| 2 | 20 | 18 | 16 | 14 | 12 |
| 3 | 22 | 24 | . | . | . |
| : | . | . | . | . | . |
| : | . | . | . | . | . |

What is the sum of the row of five numbers where the number 94 appears?

Answer: _____

