Name: _____ ( )

Class: Primary 6 _____

CHIJ ST NICHOLAS GIRLS' SCHOOL (PRIMARY)

Primary 6 Mathematics

2019 Termly Assessment

26 February 2019

Total Marks	55

_____

Parent's/Guardian's Signature

Time : 1 hour 30 minutes

INSTRUCTIONS TO CANDIDATES

Do not turn over this page until you are told to do so.
Follow all instructions carefully.
Answer all questions.
Write your answers in this booklet
The use of an approved calculator is expected, where appropriate.

This booklet consists of 16 printed pages.

Questions **1** to **5** carry 2 marks each. Show your working clearly and write your answers in the spaces provided. For questions which require units, give your answers in the units stated. (10 marks)

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1. Azura has 473 marbles and Lillian has 259 marbles. How many marbles must Azura give to Lillian such that both of them will have the same number of marbles?

Ans : _____

2. Simplify $(7x + 4 - 3x) + 6 \div 2$.

Ans : _____

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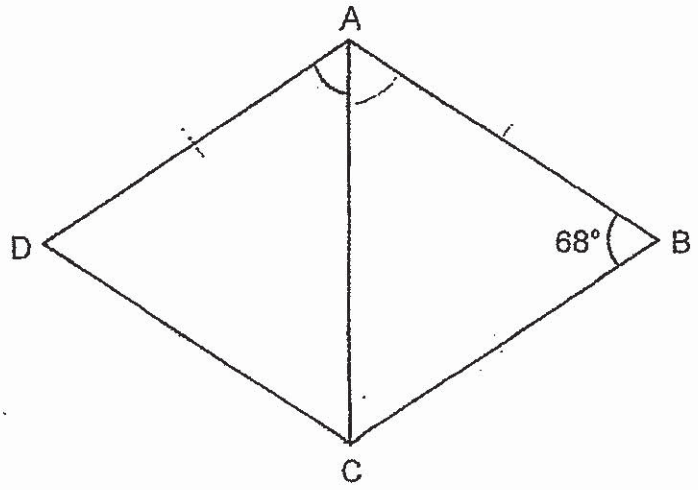
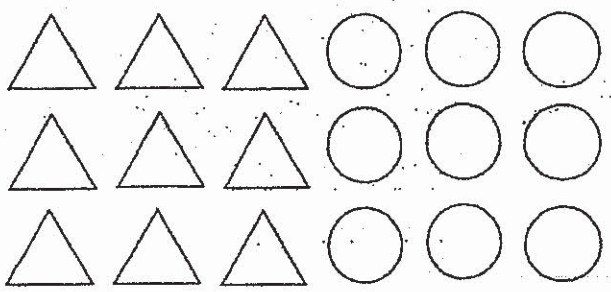
3. ABCD is a rhombus. Find $\angle$ DAC.



Ans : _____°

4. There are some triangles and circles. 4 circles are removed. What percentage of the remaining shapes are triangles? Round your answer to the nearest whole number.



Ans : _____%

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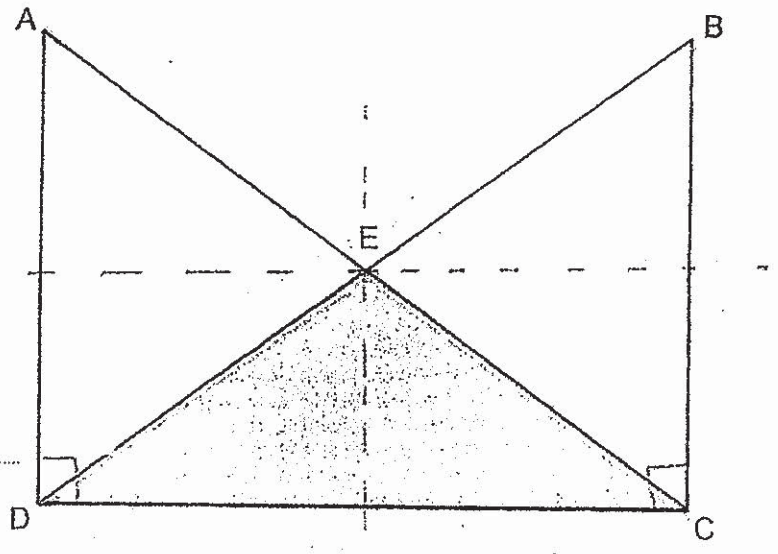
5. The figure below is made up of 3 triangles, ADE, BCE and CDE. ADC and BCD are 2 identical right-angled triangles. Point E is the midpoint of Line AC and Line BD.



Each statement below is either true, false or not possible to tell from the information given. For each statement, put a tick (✓) in the correct column.

Statement	True	False	Not possible to tell
In Triangle BCE, BC is the base and BE is the height.			
The area of Triangle CDE is $\frac{1}{3}$ of the area of the whole figure.			

For questions **6** to **17**, show your working clearly and write your answers in the spaces provided. The number of marks available is shown in the brackets ( ) at the end of each question or part-question. (45 marks)

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6. The average English score of a group of 12 pupils was 78. When 3 pupils left the group, the average score of the remaining pupils became 82. What was the total English score of the 3 pupils who left?

Ans : _____ [3]

7. The total mass of Alvin, Brian and Calvin is $(4n + 9)$ kg. The mass of Alvin is $2n$ kg and the mass of Brian is half of Alvin's.

(a) What is the mass of Calvin? Give your answer in terms of n.

(b) Given $n = 35$, what is the mass of Calvin?

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Ans : (a) _____ [2]

(b) _____ [1]

8. Samuel baked some muffins. He sold $\frac{1}{3}$ of them in the morning and $\frac{4}{9}$ of them in the afternoon. He had 36 muffins left. How many muffins did Samuel bake?

Do not write in this space

Ans : _____ [3]

9. Ali wanted to return a book that was overdue for 6 days. The overdue charges for each book are shown in the table below.

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Overdue charges per book	
No. of days overdue	Charges
First 5 days	$0.15 per day
Every additional day	$0.35 per day

Ali had only $0.85. How much more did he need to pay for the overdue charges?

Ans : _____ [3]

10. The ratio of the number of twenty-cent coins to the number of one-dollar coins in a box is 9 : 5. There are 104 more twenty-cent coins than one-dollar coins. What is the difference between the value of the twenty-cent coins and the one-dollar coins?

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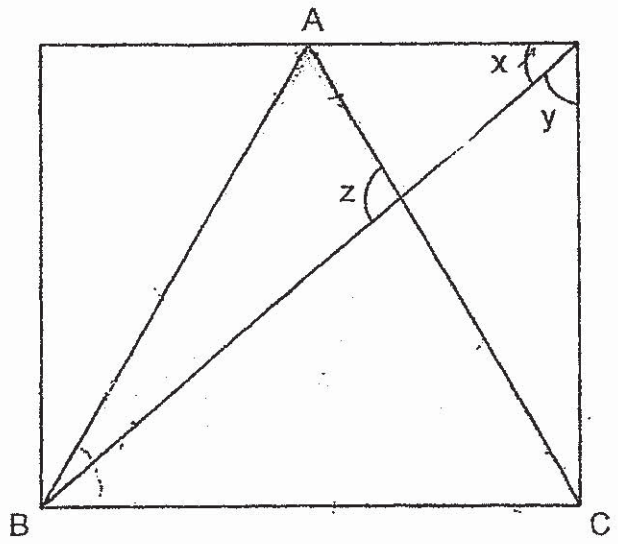
Ans : _____ [4]

11. The figure below shows a rectangle. ABC is an equilateral triangle.



The ratio of $\angle x$ to $\angle y$ is 4 5. Find the value of $\angle z$.

Ans : _____ [3]

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12. Mrs Ng wants to buy the following three toys for her children for Christmas.

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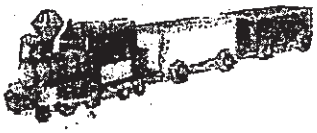
Toy Blocks
Promotional Price: $35

Teddy Bear
Promotional Price: $9



Toy Train
Usual Price: $55

She has two options for her purchase.

Option 1:
Use her membership card and get a 15% discount on items that are not on promotion.

Option 2:
Use a $10 discount voucher to get $10 off her total purchase.

Which option should she choose if she wants to enjoy more savings? How much more savings would she enjoy if she chooses that option?

Ans : Option _____ [2]

Savings: _____ [1]

13. Water flowed from a tap at the same rate into a rectangular tank measuring 50 cm by 38 cm by 65 cm. At 6 p.m., the height of the water in the tank was 13 cm. At 6.30 p.m., it was $\frac{1}{2}$ filled with water. How much water flowed into the tank in one minute?

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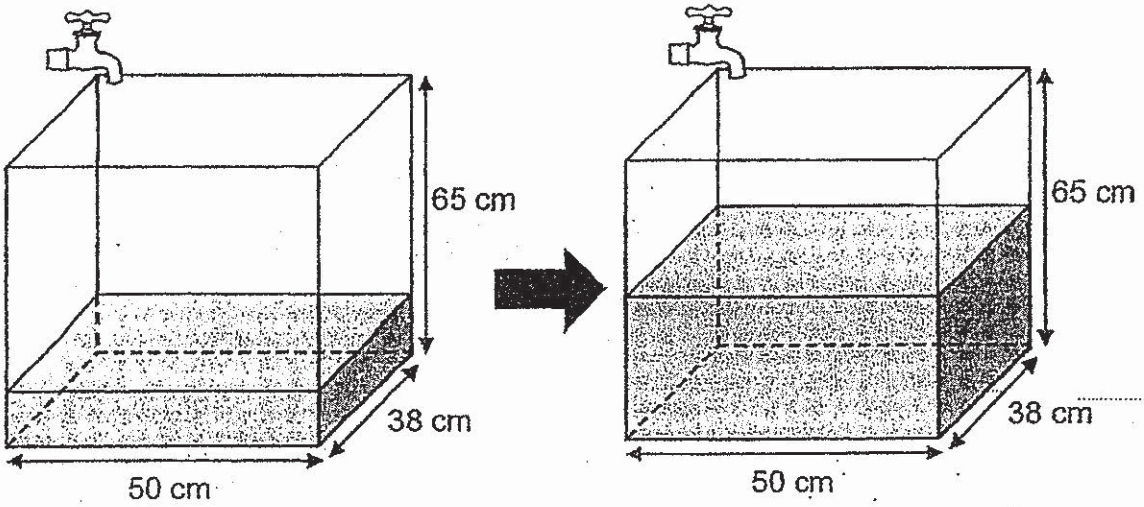
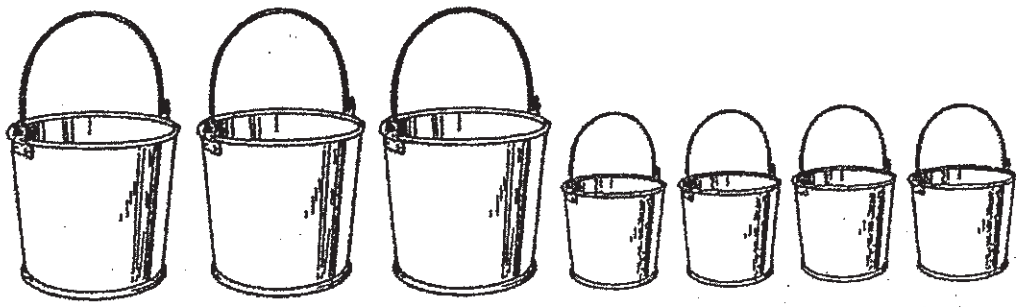


Ans : _____ [4]

14. Sulyn filled two types of pails, large and small, with some red paint that she had bought. She filled 3 identical large pails and 4 identical small pails to the brim with 10.1 ℓ of red paint.



She could not fill another large pail to the brim with the remaining amount of red paint as she was short of 0.3 ℓ of red paint. Hence, she filled another small pail to the brim and had 0.5 ℓ of red paint left.

(a) How many more litres of red paint can each large pail hold than each small pail?

(b) How many litres of red paint did Sulyn buy?

Ans : (a) _____ [1]

(b) _____ [3]

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15. A wooden path of length 19.8 m is completely covered with similar wooden planks, following the pattern shown below. The width of the path is 110 cm.

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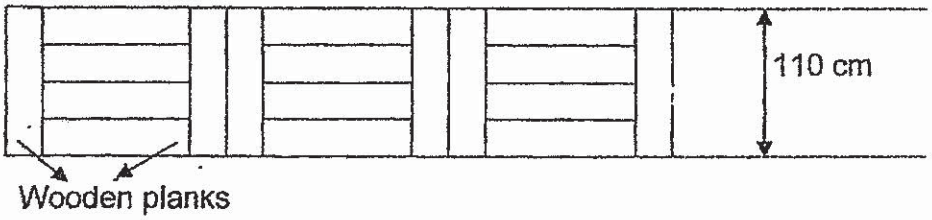

(a) What is the breadth of each wooden plank?

(b) How many wooden planks were used to cover the entire path?

Ans : (a) _____ [1]

(b) _____ [4]

16. Nuts were sold at \$8 per kilogram. Mrs Ho spent some money to buy some nuts. She gave $2\frac{1}{2}$ kg of nuts to her neighbours and $\frac{1}{5}$ of the remainder to her son. She gave the rest of the nuts equally to her 3 daughters. Each daughter received 1 kg of nuts. How much did Mrs Ho spend to buy the nuts?

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Ans : _____ [5]

17. Ping Ting draws some triangles that follow a pattern. The first four figures are shown below.

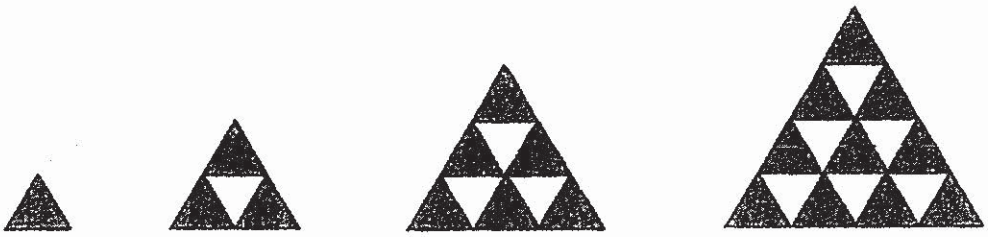

Figure 1 Figure 2 Figure 3 Figure 4

(a) Study the pattern and complete the table below.

Figure Number	Number of shaded triangles	Number of unshaded triangles	Total number of triangles
1	1	0	1
2	3	1	4
3	6	3	9
4	10	6	16
5	_____	_____	_____

[1]

(b) What is the total number of triangles in Figure 17?

(c) How many unshaded triangles will there be in Figure 25?

Ans : (b) _____ [2]

(c) _____ [2]

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End of Paper

ANSWER KEY

YEAR : 2019
LEVEL : PRIMARY 6
SCHOOL : CHIJ ST NICHOLAS GIRLS' SCHOOL (PRIMARY)
SUBJECT : MATHEMATICS
TERM : CA1

Q1	473 – 259 = 214 214 ÷ 2 = 107 Ans → 107 marbles
Q2	(7x + 4 – 3x) + 6 ÷ 2 = (4x + 4) + 3 = 4x + 7 Ans → 4x + 7
Q3	180 – 68 = 112 112 ÷ 2 = 56 Ans → 56°
Q4	Triangle : Shape → 9 : 5 $\frac{9}{14} \times 100\% = 64\frac{2}{7}$ Ans → 64%
Q5	(a) False (b) Not possible to tell → Base and height might different length.
Q6	Total of 12 pupils → 12 x 78 = 936 Total of 9 pupils → 9 x 82 = 738 936 – 738 = 198
Q7	A → 2n B → 2n ÷ 2 = n C → 4n + 9 – 2n – 1n = n + 9 (a) (n + 9)kg (b) 35 + 9 = 44kg
Q8	$1 - \frac{1}{3} - \frac{4}{9} = \frac{9}{9} - \frac{3}{9} - \frac{4}{9} = \frac{2}{9}$ 36 ÷ 2 x 9 = 162 Ans → 162 muffins
Q9	0.15 x 5 = 0.75 0.75 + 0.35 = 1.10 1.10 = 0.85 = $0.25
Q10	104 = 9u – 5u 4u = 104 u = 104 ÷ 4 = 26 For twenty-cent coins, 26 x 9 = 234 234 x 0.20 = 46.80 For one-dollar coins. 5 x 26 = 130 130.00 – 46.80 = $83.20

Q11	$\angle x : \angle y = 4 : 5$ (total of 90°) $\angle x = 40^\circ$; $\angle y = 50^\circ$ $\angle xBC = 40^\circ$ $\angle Abx = 60^\circ - 40^\circ = 20^\circ$ $\angle z = 180^\circ - 60^\circ - 20^\circ = 100^\circ$ Ans → 100°
Q12	Option 1, $\frac{85}{100}$ x 55 = 46.75 46.75 + 35 + 9 = \$90.75 Option 2, 35 + 9 + 55 – 10 = \$89 Ans(a) → Option 2 \$90.75 – \$89.00 = \$1.75 Ans (b) → \$1.75
Q13	6.00pm 50 x 38 x 13 = 24700 6.30pm 65 ÷ 2 = 32.5 50 x 38 x 32.5 = 61750 61750 – 24700 = 37050 37050 ÷ 30 = 1235 Ans → 1235ml
Q14	0.5 + 0.3 = 0.8 Ans (a) → 0.8L 0.8 x 3 = 2.4 10.1 – 2.4 = 7.7 4 x 3 = 7 7.7 ÷ 7 = 1.1 (Small pail) 1.1 + 0.5 = 1.6 (extra) 10.1 + 1.6 = 11.7 Ans (b) → 11.7L
Q15	110 ÷ 4 = 27.5 Ans (a) → 27.5cm 27.5 x 2 + 110 = 165 19.8m = 1980cm 1980 ÷ 165 = 12 12 x 6 =72 Ans (b) → 72 planks
Q16	\$8 x 3 = \$24 \$24 ÷ 4 x 5 = \$30 $2\frac{1}{2} kg$ x \$8 = \$20 \$30 + \$20 = \$50 Ans →50
Q17	(a) 15 , 10 , 25 (b) 17 x 17 = 289 (c) 1 + 2 + … + 24 = 24 x (median + 0.5) {For eg, 1 + 2 + 3 = 3 x 2} = 24 x 12.5 = 300 {For eg, 1 + 2 + 3 + 4 = 4 x 2.5}