Name: _____ ( )

Class: Primary 6 _____

CHIJ ST NICHOLAS GIRLS' SCHOOL (PRIMARY)

Primary 6 Mathematics

2018 Semestral Assessment One

Paper 1

Booklet A

8 May 2018

15 questions
20 marks

Total Time for Booklets A and B : 1 hour

INSTRUCTIONS TO CANDIDATES

Do not turn over this page until you are told to do so.
Follow all instructions carefully.
Answer all questions.
Shade your answers in the Optical Answer Sheet (OAS) provided.
The use of calculators is **NOT** allowed.

This booklet consists of 8 printed pages including the cover page.

Questions **1** to **10** carry 1 mark each. Questions **11** to **15** carry 2 marks each. For each question, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4). Shade the correct oval (1, 2, 3, or 4) on the Optical Answer Sheet.

(20 marks)

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1. Round 649 098 to the nearest thousand.

   (1) 649 000
   (2) 649 090
   (3) 649 100
   (4) 650 000

2. Which one of the following is one hundred and five thousand and eleven written in figures?

   (1) 1 005 011
   (2) 105 011
   (3) 100 511
   (4) 10 541

3. Bosco had 90 game cards. He gave 40p game cards to his brother.
   The remaining game cards were then divided equally among his 3 friends.
   How many game cards did each of his friends receive?

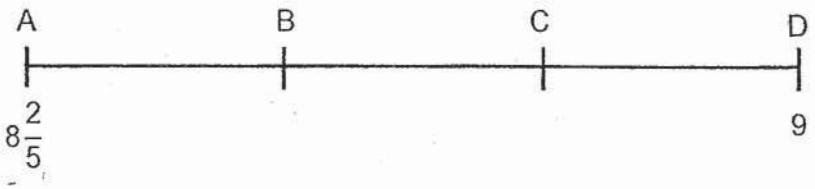
   (1) $(\frac{50p}{3})$
   (2) $(\frac{90-40p}{3})$
   (3) $(90-\frac{40p}{3})$
   (4) $(90-40p)$

4. The table below shows the timing taken by 4 boys to run 800 m before and after a month of training. Which boy made the most improvement in his timing?

Name	Timing taken before training (in seconds)	Timing taken after training (in seconds)
Choon Tat	125	114
Faris	132	136
Lincoln	136	117
Siva	127	129

(1) Choon Tat
(2) Faris
(3) Lincoln
(4) Siva

5. In the number line below, AB = BC = CD. Find the value of C.

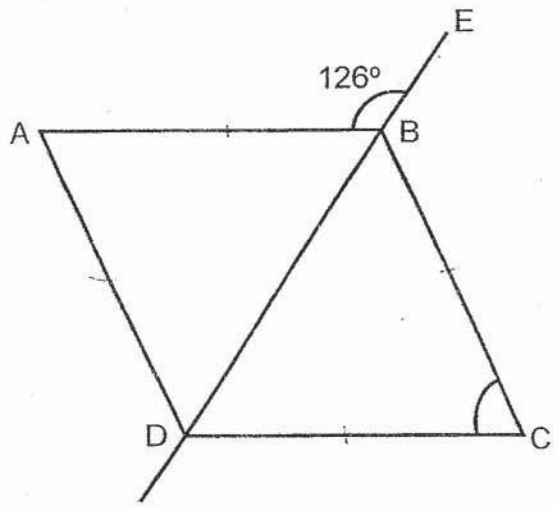


(1) 8.50
(2) 8.60
(3) 8.80
(4) 8.90

6. Patsy, Lina and Kai.Shin shared a sum of money in the ratio 2 : 5 : 6. Lina had $70. How much more money did Kai Shin have than Patsy?

(1) $84
(2) $56
(3) $28
(4) $14

7. In the figure below, ABCD is a rhombus. DBE is a straight line. Find ∠BCD.

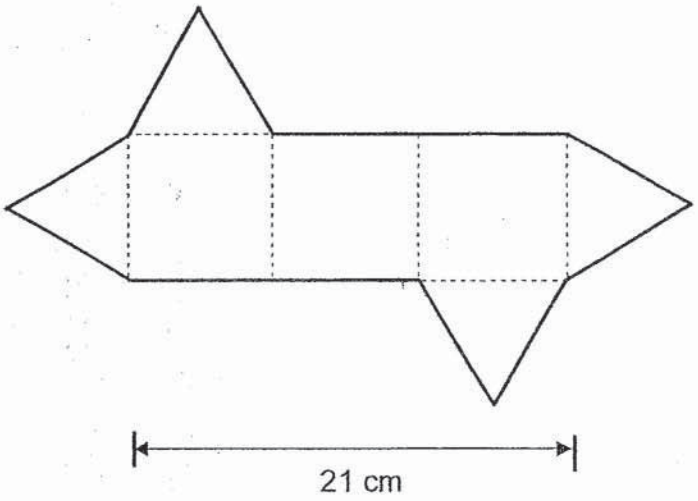


(1) 54°
(2) 63°
(3) 72°
(4) 81°

8. Nizam spent $400 last month. He spent $500 this month. Find the percentage increase in his spending this month.

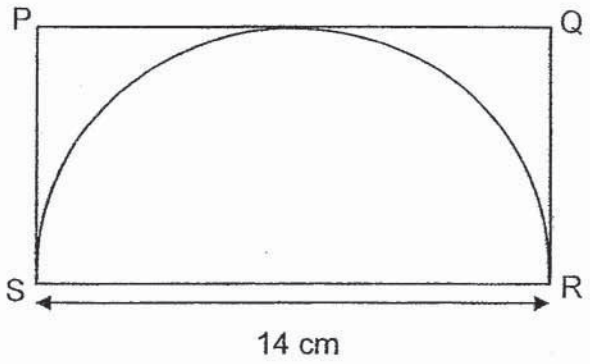
(1) 20%
(2) 25%
(3) 75%
(4) 125%

9. The figure below is made up of 4 identical equilateral triangles and 3 identical squares. Find the perimeter of the figure.



(1) 168 cm
(2) 126 cm
(3) 98 cm
(4) 84 cm

10. PQRS is a rectangle. Find the area of the semicircle. (Take $\pi = \frac{22}{7}$)



(1) 308 cm^2

(2) 154 cm^2

(3) 77 cm^2

(4) 22 cm^2

11. Lee Sheng has \$270 in his wallet. He has only \$2 and \$5 notes.
The number of \$2 notes is twice the number of \$5 notes.
Find the total value of the \$2 notes.

(1) \$60

(2) \$90

(3) \$120

(4) \$150

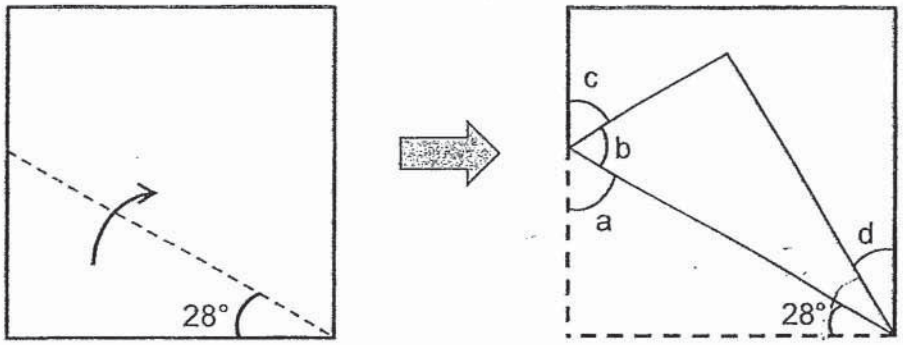
12. Jean and Devi spent an average amount of $1208 on a trip. Jean spent $200 less than Devi. How much did Devi spend?

(1) $504
(2) $704
(3) $1108
(4) $1308

13. Freda had some stickers. She gave $\frac{1}{6}$ of the stickers to Breanne and $\frac{4}{5}$ of the remainder to Nicolette. She gave 102 stickers to Breanne. How many stickers did she give to Nicolette?

(1) 510
(2) 408
(3) 306
(4) 204

14. The figure below shows a square piece of paper that has been folded along the dotted line. Which one of the marked angles has a value of 56°?



(1) ∠a

(2) ∠b

(3) ∠c

(4) ∠d

15. Conrad had some blueberry tarts and kiwi tarts. After selling $\frac{5}{6}$ of his blueberry tarts and $\frac{3}{7}$ of his kiwi tarts, he had the same number of blueberry tarts and kiwi tarts left. Find the ratio of the number of blueberry tarts to the number of kiwi tarts Conrad had at first.

(1) 1 : 3

(2) 5 : 3

(3) 24 : 7

(4) 35 : 18

** End of Booklet A**

Name: _____ ( )

Class: Primary 6 _____

CHIJ ST NICHOLAS GIRLS' SCHOOL (PRIMARY)

Primary 6 Mathematics

2018 Semestral Assessment One

Paper 1

Booklet B

8 May 2018

Booklet A	20
Booklet B	25
Total (Paper 1)	45

15 questions
25 marks

Total Time for Booklets A and B : 1 hour

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 calculators is NOT allowed.

This booklet consists of 11 printed pages including the cover page.

Questions **16** to **20** carry 1 mark 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. (5 marks)

Do not write in this space

16. Simplify $11e - (3e - e) + 6 + e$.

Ans : _____

17. The product of two fractions is $\frac{5}{6}$. One of the fractions is $\frac{6}{7}$.

What is the other fraction?

Ans : _____

18. Find the value of $3 \div 7$.
Express vour answer as a decimal to 2 decimal places.

Do not write in this space

Ans: _____

19. Mayson's height is $\frac{9}{8}$ of Junkai's height. Mayson is 144 cm tall. How tall is Junkai?

Ans : _____

20. Mrs Yeh bought a kettle. The price of the kettle was $40. She had to pay 7% GST. How much GST did she pay?

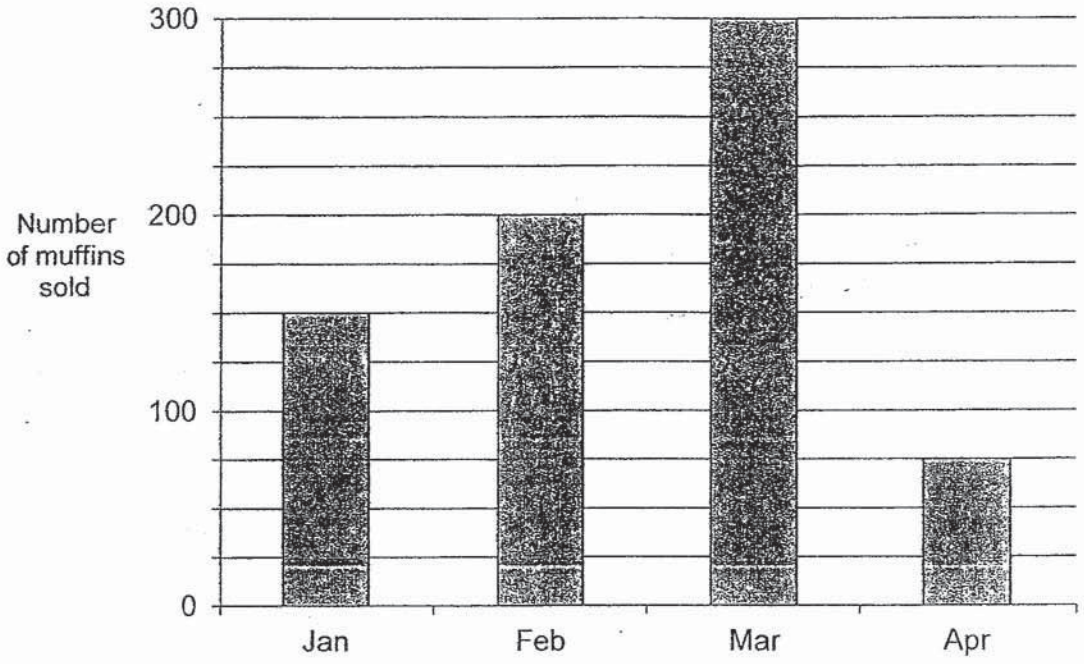
$40
GST not included

Ans : $ _____

Questions **21** to **30** 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. (20 marks)

Do not write in this space

21. The bar graph below shows the number of muffins sold by Muffy Bakery from January to April.



(a) In which month did Muffy Bakery sell half as many muffins as in March?

(b) Write down all the months in which Muffy Bakery sold more than 150 muffins.

Ans : (a) _____

(b) _____

22. A container with Object A has a mass of 3.1 kg. The same container with Object B has a mass of 7.5 kg. Object B is 3 times as heavy as Object A. Find the mass of Object A.

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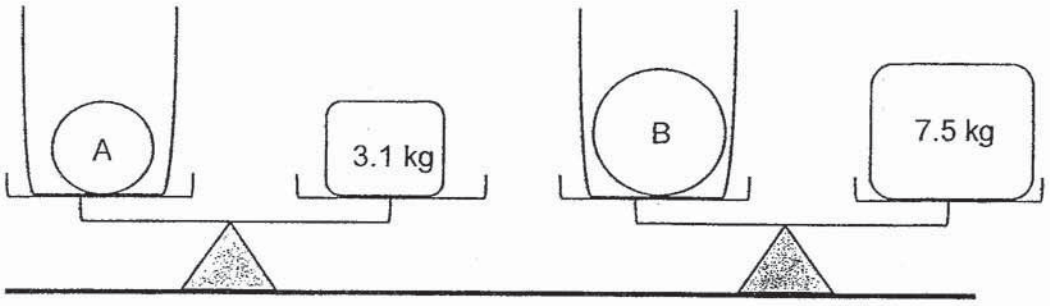


Ans : _____ kg

23. The table below shows taxi fares.

Meter fare	
First 2 km or less	$3.50
Every 400 m thereafter or less	$0.30

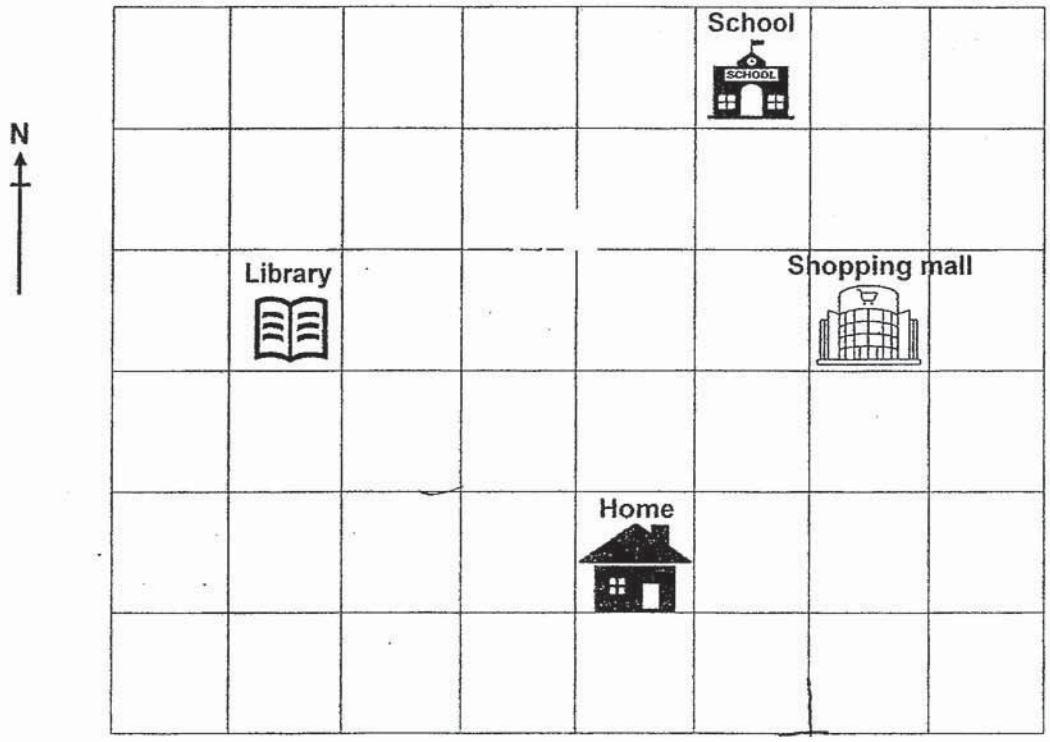
Aiasha travelled 5.6 km by taxi. How much did she pay?

Do not write in this space

Ans : $ _____

24. Elenor's home, the library, the shopping mall and her school are located as shown in the square grid below.

Do not write in this space



(a) In what direction is the shopping mall from Elenor's home?

(b) A new swimming complex will be built at a location south-east of the library and south-west of the school. Put a tick (√) in the square where the new swimming complex will be built.

Ans : (a) _____

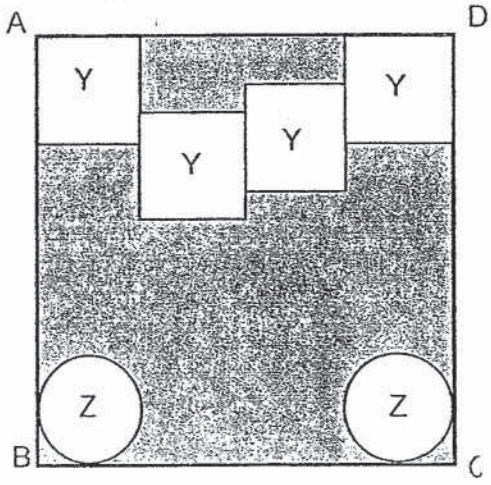
25. The table below shows the age of 4 girls. Whose age is the nearest to their average age?

Do not write in this space

Name	Age (years)
Kelly	15
Huili	13
Dily	19
Christy	16

_____

26. In the figure below, four identical squares Y and two circles Z lie within a large square ABCD. The area of square Y is equal to the area of circle Z. What fraction of the square ABCD is shaded?



Ans : _____

27. A box contains silver, gold and black buttons. There are 630 silver buttons. The ratio of the number of gold buttons to the total number of buttons in the box is 2 : 9. There is an equal number of gold and black buttons. How many gold and black buttons are there altogether?

Do not write in this space

Ans : _____

28. At the end of a school term, the number of junior players in a water polo team decreased by 20% to 40. Another 35 senior players joined the team and there were 145 junior and senior players altogether.

(a) Did the overall percentage in the membership increase, decrease or remain the same?

(b) How many players were there altogether at first?

Ans : (a) _____

(b) _____

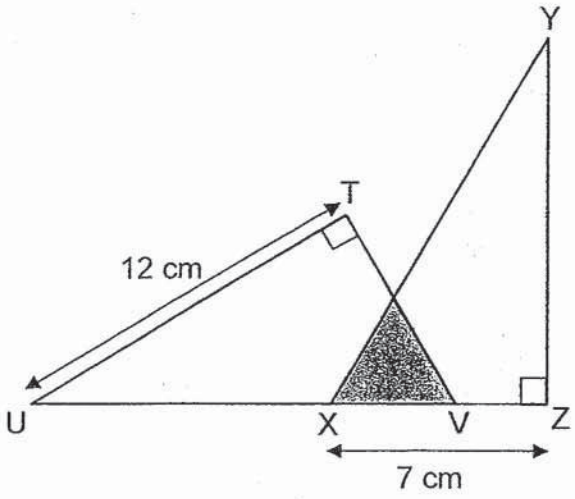
29. Two numbers add up to 581. One of them is a 2-digit number and the other is a 3-digit number. What is the smallest possible difference between the two numbers?

Do not write in this space

Ans : _____

30. In the figure below, TUV and XYZ are identical right-angled triangles. The total area of the unshaded parts is 68 cm^2. Find the area of the shaded part.

Do not write in this space



Ans : _____ cm^2

** End of Booklet B **

Name: _____ ( )

Class: Primary 6 _____

CHIJ ST NICHOLAS GIRLS' SCHOOL (PRIMARY)

Primary 6 Mathematics

2018 Semestral Assessment One

Paper 2

8 May 2018

Paper 1	45
Paper 2	55
Total	100

_____

Parent's / Guardian's Signature

17 questions
55 marks

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 including the cover page.

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)

Do not write in this space

1. A packet of nougats cost $16. Helen bought 4 packets of nougats and 3 packets of mixed nuts. She found that she could buy 5 packets of mixed nuts with the same amount of money. How much did each packet of mixed nuts cost?

Ans : $ _____

2. A coat cost 3 times as much as a dress. The dress cost $25 more than a wallet. Kieran paid $352.50 for these three items. How much did the wallet cost?

Ans : $ _____

3. At Cafelicious Coffee House, the ratio of the price of a cup of coffee to the price of a cup of milo is 4 : 5. The price of a cup of tea is half the price of a cup of coffee. What is the ratio of the price of a cup of milo to the price of a cup of coffee to the price of a cup of tea?

Do not write in this space

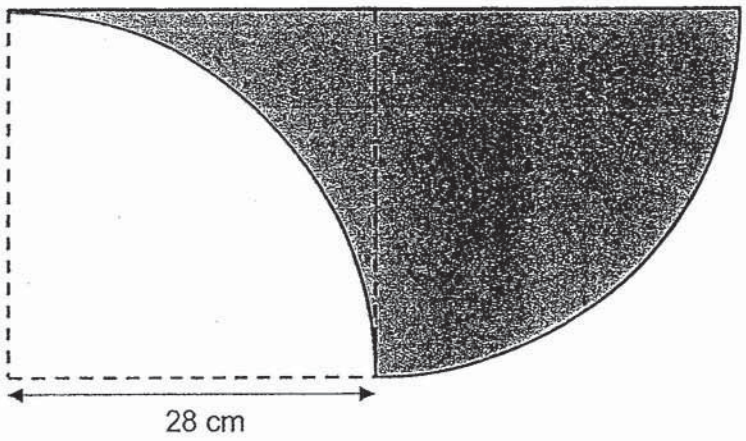
Ans : _____

4. Nadia bought 2600 g of rambutans. She ate 200 g of the rambutans and gave $\frac{1}{4}$ of the remainder to her friend. What was the mass of rambutans she had left?

Ans : _____ g

5. The figure below is made up of 2 identical quarter circles and a square. Find the perimeter of the shaded part. (Take $\pi = 3.14$)

Do not write in this space

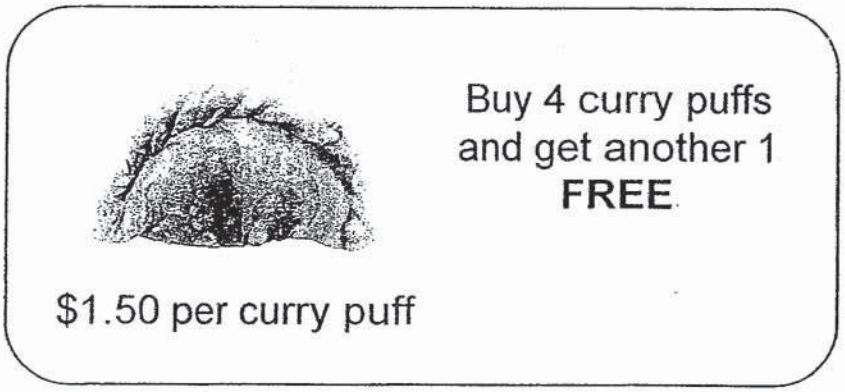


Ans : _____ cm

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 brackets [ ] at the end of each question or part-question. (45 marks)

Do not write in this space

6. At Chee Kee Curry Puff stall, the price of a curry puff is $1.50. For every 4 curry puffs bought, the stall gives away 1 curry puff free.



(a) Wenlong wants to get 7 curry puffs. How much will he have to pay?

(b) Alison has $50. What is the greatest number of curry puffs she can get?

Ans : (a) _____ [1]

(b) _____ [2]

7. Mr Seet had a number of highlighters for sale. $\frac{2}{5}$ of the highlighters were red and the rest were yellow. Mr Seet sold $\frac{1}{2}$ of the total number of highlighters. $\frac{3}{4}$ of the red highlighters were sold. 104 yellow highlighters were left. How many red highlighters did Mr Seet sell?

Do not write in this space

Ans : _____ [3]

8. At a fruit stall, Shona paid $20.40 for a durian and 6 pears. Jillisa paid $31.20 for a durian and 15 pears. Richard bought 6 durians. How much did he pay?

Do not write in this space

Ans : _____ [3]

9. Ian uses 1-cm cubes ( ) to form the figures below that follow a pattern.

Do not write in this space

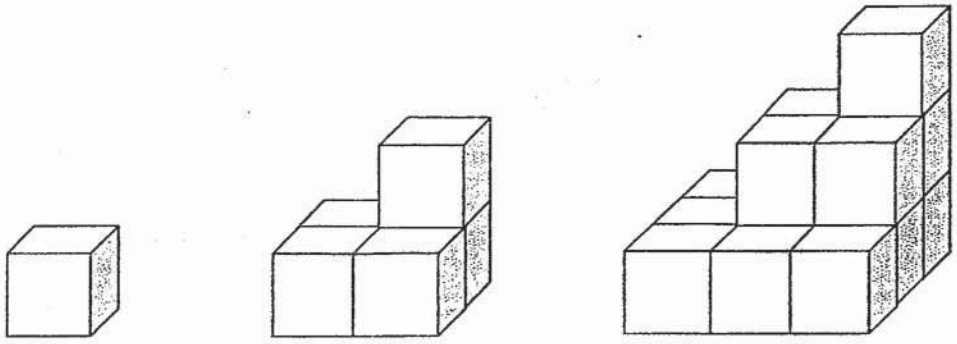


Figure 1 Figure 2 Figure 3

(a) How many more cubes are needed to make Figure 4 than Figure 3?

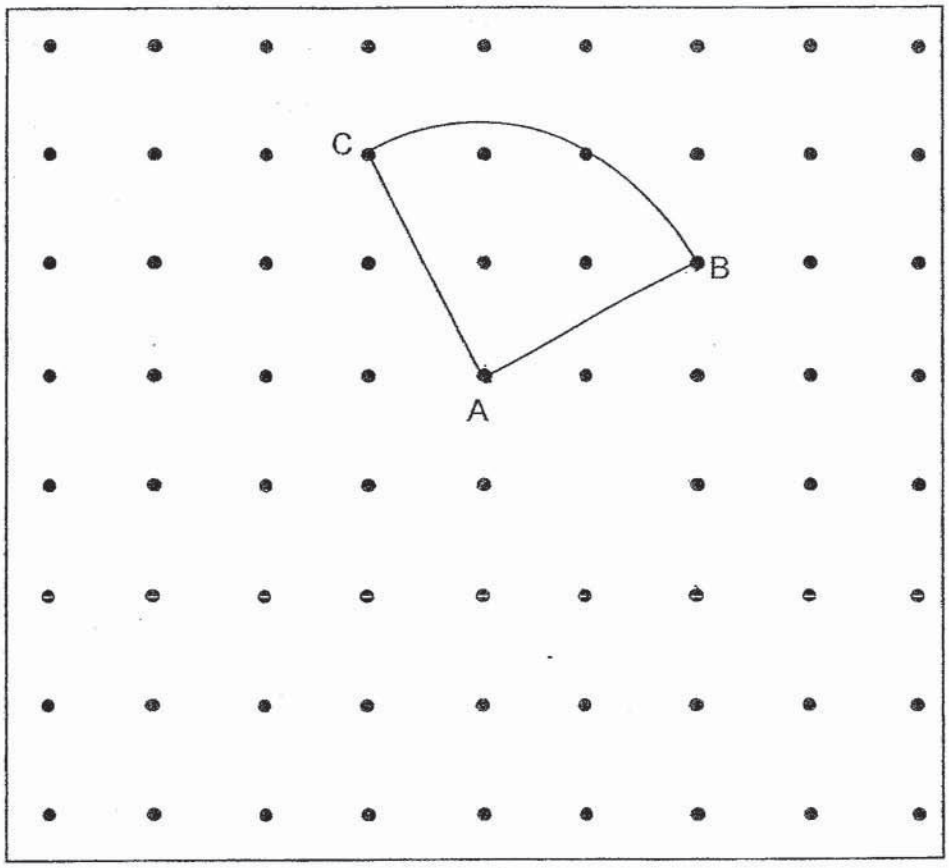
(b) What is the difference between the total number of cubes in Figure 7 and Figure 9?

Ans : (a) _____ [1]

(b) _____ [2]

Do not write in this space

10. A quadrant is drawn inside a box.



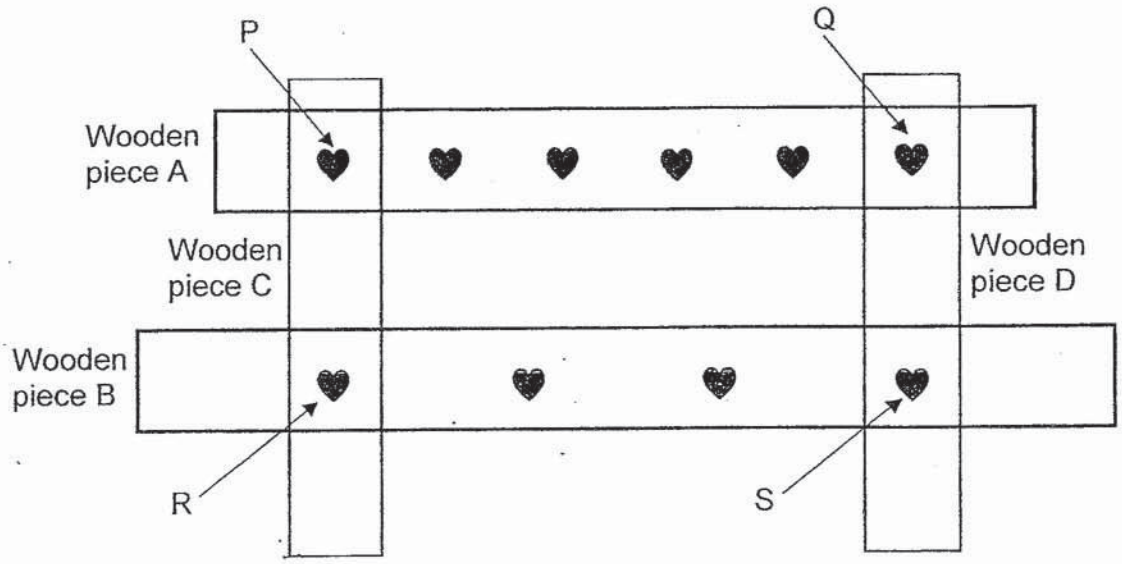
(a) Measure and write down the length of line AB.

(b) D is one of the dots inside the box. Draw two lines AD and BD to complete an isosceles triangle ABD with AB = AD.
Label the triangle ABD. [2]

Ans : (a) _____ [1]

11. Lauren glued 4 wooden pieces A, B, C and D to make a photograph frame as shown below. She glued some beads on the wooden pieces. Wooden piece A had 6 beads which divided it into 7 equal parts. Wooden piece B had 4 beads which divided it into 5 equal parts. In the frame, the beads P, Q, R and S were four corners of a rectangle. Wooden piece A was 42 cm long. What was the length of wooden piece B?

Do not write in this space



Ans : _____ [3]

12. Mrs Tan ~~shared~~ divided $24n$ cookies equally among her three children, Amelie, Brian and Dawei. Amelie ate 3 of her cookies and gave the rest to Dawei. Brian gave $5n$ cookies to Dawei. Dawei ate $3n$ of his cookies.

(a) How many cookies did Dawei receive from his siblings? Give your answer in terms of n.

(b) If $n = 4$, how many cookies did Dawei have left in the end?

Do not write in this space

Ans : (a) _____ [2]

(b) _____ [2]

13. Haafizah bought a coffee maker for $227.50 after a 35% discount.

(a) What was the price of the coffee maker before the discount?

(b) She then bought an oven for $120. The total discount for the two items was $152.50. What was the percentage discount given for the oven?

Do not write in this space

Ans : a) _____ [1]

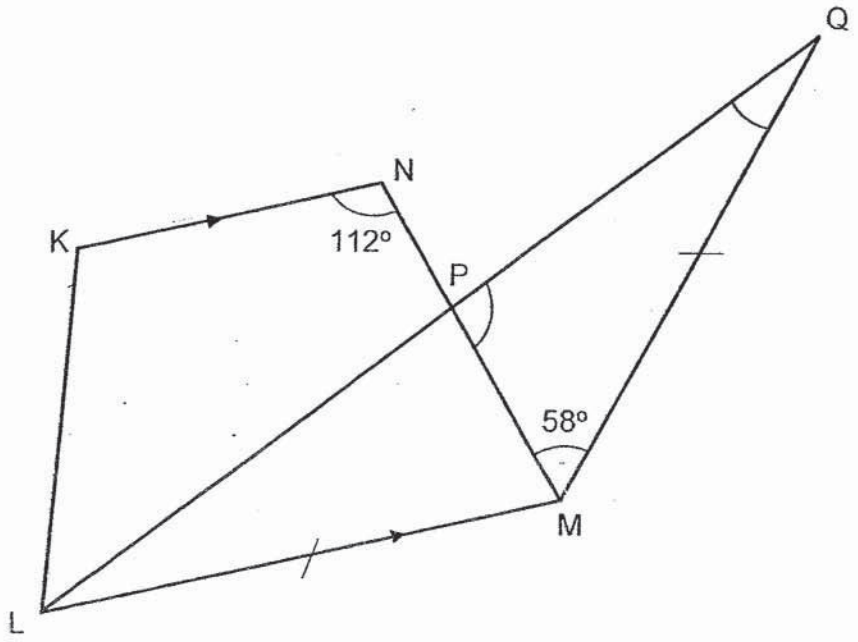
b) _____ [3]

14. In the figure beow, KLMN is a trapezium and LMQ is an isosceles triangle. LPQ is a straight line. KN // LM and LM = MQ. $\angle KNM = 112^\circ$ and $\angle PMQ = 58^\circ$.

(a) Find $\angle LQM$.

(b) Find $\angle MPQ$.

Do not write in this space



Ans : (a) _____ [2]

(b) _____ [2]

15. Tina wants to make 20 identical bracelets and 36 identical necklaces using beads. She has made 18 bracelets and 10 necklaces using 480 beads. The number of beads she used for 5 necklaces is the same as that for 7 bracelets.

(a) How many bracelets can be made with the same number of beads used to make 10 necklaces?

(b) Find the total number of beads Tina will need to make the remaining bracelets and necklaces.

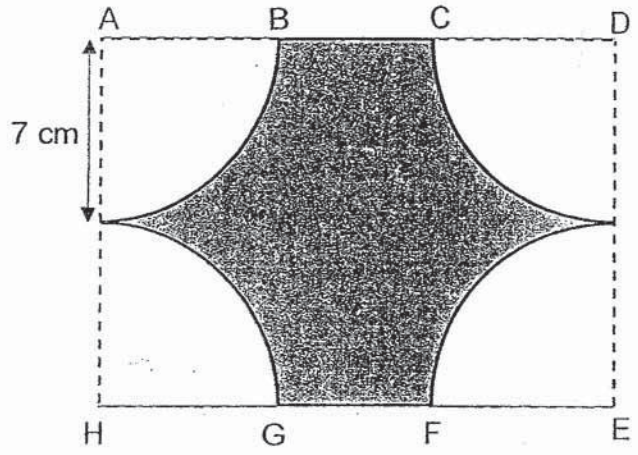
Do not write in this space

Ans: (a) _____ [1]

(b) _____ [4]

16. In the figure below, ADEH is a rectangular cardboard. Four identical quarter circles with radius 7 cm, have been cut from it as shown below. The remaining cardboard, which is the shaded part, has an area of 98 cm^2. Using $\pi = \frac{22}{7}$, find the length of BC.

Do not write in this space



Ans : _____ [5]

17. Kathleen had some money at first. She spent $\frac{1}{5}$ of it on a watch and $\frac{2}{3}$ of it on a handbag. After that, her grandparents gave her $171. The ratio of the total amount of money she had at the end to the amount of money she had at first was 7 : 5. How much money did Kathleen have at first?

Do not write in this space

Ans : _____ [5]

** End of Paper **

Answer Key & Worked Solutions

St Nicholas Paper

P6 Mathematics SA1 2018

Paper 1

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
1	2	2	3	3	2	3	2	4	3
Q11	Q12	Q13	Q14	Q15					
3	4	2	3	3					

Q16) 10e + 6

Q17) $\frac{35}{36}$

Q18) 0.43

Q19) 128 cm

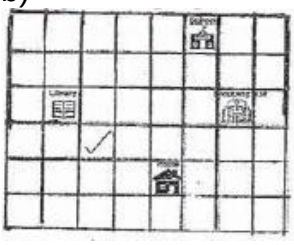
Q20) $2.80

Q21)
a) Jan
b) Feb & Mar

Q22) 2.2kg

Q23) $6.20

Q24)
a) North-east
b)



Q25) Christy

Q26) $\frac{5}{8}$

Q27) 504
gold and
black buttons

Q28)
a) increase
b) 120 players

Q29) 383

Q30) 8 cm^2

Paper 2

Q1. $16 x 4 = $64
$64 ÷ 2 = $32

Q2. 352.50 + 25 = 377.50
377.50 ÷ 5 = 75.50
75.50 – 25 = $50.50

Q3. 4 ÷ 2 = 2
Milo : Coffee : Tea → 5 : 4 : 2

Q4. 2600g – 200g = 2400g
2400g ÷ 4 = 600g
2400g – 600g = 1800g

Q5. (a) $\frac{1}{4}$ x 3.14 x 56 = 43.96
43.96 x 2 = 87.92
87.92 + 28 + 28 = 143.92 cm

Worked Solutions

Show your working clearly in the space provided for each question and write your answers in the spaces provided.

6. a)

Cost of 5 curry puffs = 4 x 1.50 = $6

Cost of 2 more curry puffs = 2 x 1.50 = $3

Cost of 7 curry puffs = 6 + 3 = $9

b)

Cost of 1 set of 5 curry puffs = $6

Number of sets of 5 curry puffs, $50 can buy = 50 ÷ 6 = 8 remainder $2

Number of curry puff $2 can buy = 1

Greatest number of curry puffs for $50 = 8 x 5 + 1 = 41

Ans: (a) $9
(b) 41

---

7. Let number of highlighters = 20u (multiple of 4, 5)

Number of red highlighters = $\frac{2}{5}$ x 20u = 8u

Number of red highlighters left = $\frac{1}{4}$ x 8u = 2u

Total number of highlighters left = $\frac{1}{2}$ x 20u = 10u

Number of yellow highlighters left = 10u – 2u = 8u = 104

u = 104 ÷ 8 = 13

Number of red highlighters sold = 8u – 2u = 6u = 6 x 13 = 78

Ans: 78 red highlighters

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8. Cost of 1 durian and 6 pears = $20.40

Cost of 1 durian and 15 pears = $31.20

Cost of (15 – 6 pears) = 31.20 – 20.40 = $10.80

Cost of 1 pear = 10.80 ÷ 9 = $1.20

Cost of 1 durian = 20.40 – 6 x 1.20 = $13.20

Cost of 6 durians = 13.20 x 6 = $79.20

Ans: $79.20

---

9. a)

Number of cubes → 1, 5, 14, 30

Difference between cubes of Figure 4 and Figure 3 = 30 – 14 = 16

b)

Number of cubes → 1, 5, 14, 30, 55, 91, 140, 204, 285

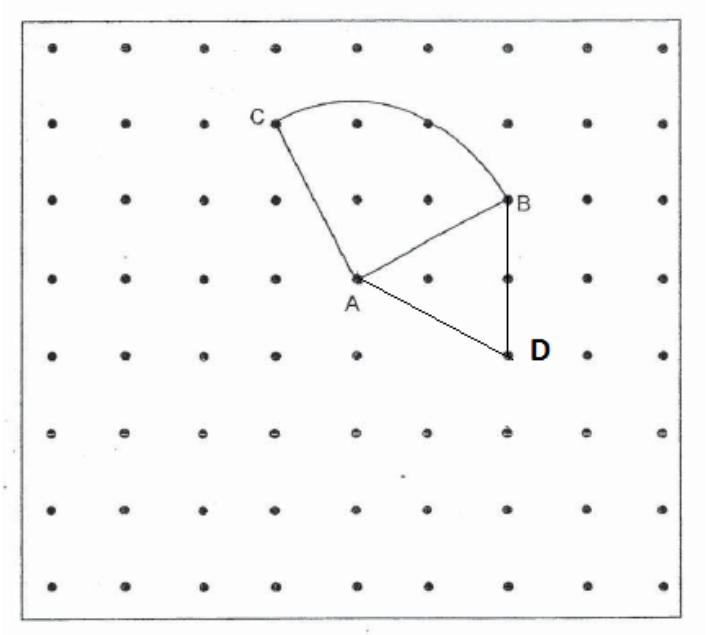
Difference between cubes of Figure 9 and Figure 7 = 285 – 140 = 145

Ans: (a) 16
(b) 145

---

10. a) 3.4 cm

b)



Ans: (a) 3.4 cm
(b) as shown

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11. $\frac{7}{7}$ of Wooden piece A = 42 cm

$\frac{1}{7}$ of Wooden piece A = 42 ÷ 7 = 6cm

$\frac{5}{7}$ of Wooden piece A = 5 x 6 = 30 cm

$\frac{3}{5}$ of Wooden piece B = 30 cm

$\frac{1}{5}$ of Wooden piece B = 30 ÷ 3 = 10 cm

$\frac{5}{5}$ of Wooden piece B = 5 x 10 = 50 cm

Ans: 50 cm

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12. a)

Number of cookies each child receive = 24n ÷ 3 = 8n

Number of cookies Amelie gave to Dawei = 8n – 3

Number of cookies Brian gave to Dawei = 5n

Number of cookies Dawei received from siblings = 8n – 3 + 5n = 13n – 3

b)

Number of cookies Dawei left in the end = 8n + 13n – 3 – 3n = 18n – 3 =

18 x 4 – 3 = 69

Ans: (a) 13n – 3
(b) 69

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13. a)

65% of coffee maker = $227.50
1% of coffee maker = 227.50 ÷ 65 = $3.50
100% of coffee maker = 3.5 x 100 = $350
b)
Discount for coffee maker = 350 – 227.50 = $122.50
Discount for oven = 152.50 – 122.50 = $30
Undiscounded price of oven = 120 + 30
Percent discount of oven = 30 ÷ 150 x 100 = 20%

Ans: (a) $350

(b) 20%

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14. a)

∠LMN = 180 – 112 = 68 °

∠LMQ = 68 + 58 = 126 °

∠LQM = (180 – 126) ÷ 2 = 27 °

b)

∠MPQ = 180 – 58 – 27 = 95 °

Ans: (a) 27 °

(b) 95 °

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15. a)

Number of beads for 5 necklaces = Number of beads for 7 bracelests

Number of beads for 10 necklaces = Number of beads for 7 x 2 bracelets

Number of bracelets made with beads of 10 necklaces = 14

b)

18 bracelets + 10 necklaces = 480 beads

18 bracelets + 14 bracelets = 480 beads

32 bracelets = 480 beads

1 bracelet = 480 ÷ 32 = 15 beads

1 necklace = $\frac{7}{5}$ x 15 = 21 beads

20 bracelets + 36 necklaces = 20 x 15 + 36 x 21 = 1056

Additional beads = 1056 – 480 = 576

Ans: (a) 14 bracelets

(b) 576 beads

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16. Area of 4 quadrants = $\frac{22}{7}$ x 7 x 7 = 154 cm^2

Area of rectangle = 98 + 154 = 252 cm^2

Breadth = 14

Length = 252 ÷ 14 = 18 cm

BC = 18 – 7 – 7 = 4 cm

Ans: 4 cm

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17. Let amount of money Kathleen had at first = 15u (multiple of 3, 5)

Amount spent on watch = $\frac{1}{5}$ x 15u = 3u

Amount spent on handbag = $\frac{2}{3}$ x 15u = 10u

Amount at the end = 15u – 3u – 10u + 171 = 2u + 171

Amount at the end also = $\frac{7}{5}$ x 15u = 21u

2u + 171 = 21u

19u = 171

u = 171 ÷ 19 = 9

Amount at first = 15u = 15 x 9 = $135

Ans: $135