Index No | | | | | | | – | |

SINGAPORE CHINESE GIRLS' SCHOOL

PRELIMINARY EXAMINATION 2018

PRIMARY 6

MATHEMATICS
PAPER 1

BOOKLET A

Name : _____( )

Class : Primary 6 24 August 2018

		Marks attained	Max Mark
Paper 1	Booklet A		20
	Booklet B		25
Paper 2			55
Total Marks			100

Parent's Signature

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15 Questions
20 Marks

Total Time for Booklets A and B: ~~50 min~~

INSTRUCTIONS TO CANDIDATES
Do not open this booklet until you are told to do so.
Follow all instructions carefully.
Answer all questions.
You are **not allowed** to use a calculator

Booklet A

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)**

---

1. What is the value of the digit 7 in 507 030?

   (1) 7
   (2) 70
   (3) 700
   (4) 7000

2. Find the value of $0.16 \div 40$.

   (1) 0.004
   (2) 0.04
   (3) 0.4
   (4) 4

3. What is the approximate height of a flagpole?

   (1) 45 cm
   (2) 250 cm
   (3) 52.5 m
   (4) 0.15 km

4. Which of the following fraction is closest to $\frac{1}{3}$?

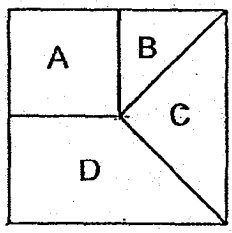
   (1) $\frac{1}{6}$
   (2) $\frac{4}{9}$
   (3) $\frac{1}{12}$
   (4) $\frac{4}{15}$

5. What is the value of $36-6\div3+2\times4$?

(1) 18
(2) 26
(3) 42
(4) 48

6. The square is cut from the center into 4 parts. Which of the following three parts will add up to form $\frac{5}{8}$ of the square?

(1) A, B and C
(2) A, B and D
(3) A, C and D
(4) B, C and D

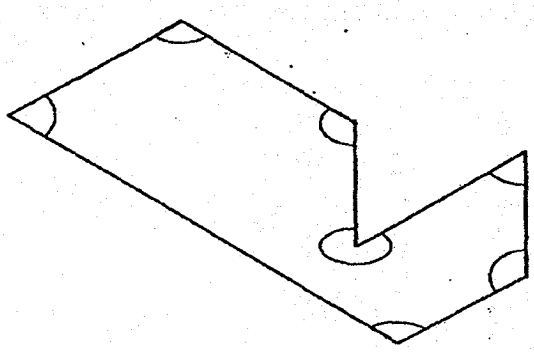


7. Find the sum of all the factors of 12.

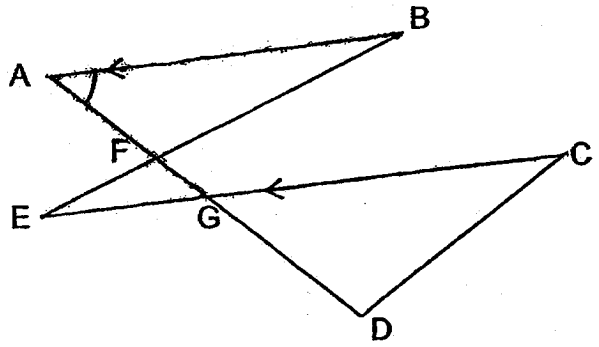
(1) 13
(2) 15
(3) 27
(4) 28

8. In the figure below, how many angles are greater than 90°?

(1) 5
(2) 2
(3) 3
(4) 7



9. Which angle is similar to $\angle BAF$?



(1) $\angle AGC$

(2) $\angle AGE$

(3) $\angle BEC$

(4) $\angle BFD$

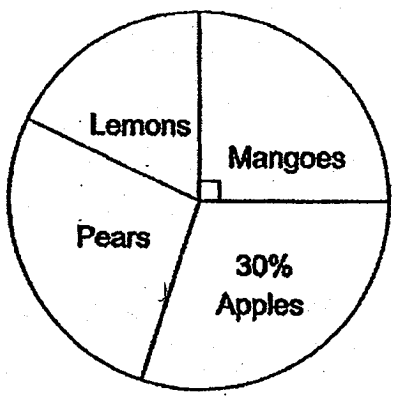
10. Mr Chong sold fruits as shown in the pie chart below. He sold $\frac{2}{3}$ as many lemons as pears. What is the ratio of the number of apples to the number of lemons sold?

(1) 2 : 3

(2) 3 : 1

(3) 3 : 2

(4) 5 : 3



11. Kavani packed 30 sweets equally into some goodie bags. She also packed 48 chocolates equally into these ~~good~~ goodie bags. How many sweets and chocolates are there in each bag?

(1) 6
(2) 12
(3) 13
(4) 4

12. 25% of the fruits at the fruit stall are oranges. 20% of the remainder are apples. The rest are pears. What percentage of the fruits are pears?

(1) 5%
(2) 15%
(3) 55%
(4) 60%

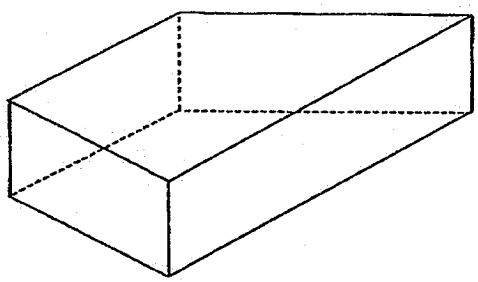
13. Dani can read 4 pages in 18 minutes. How long will she take to finish a book with 30 pages?

(1) 1h 15 min
(2) 1h 35 min
(3) 2 h 15 min
(4) 2h 35 min

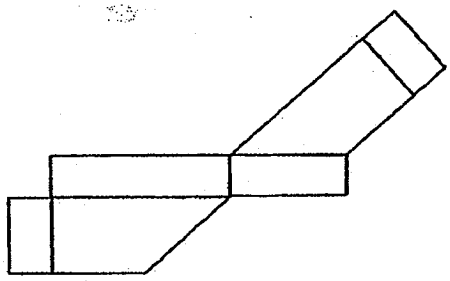
14. There was a $3 discount for every $30 spent at a departmental store. Charlotte paid $82 for the dress. What was the original price of that dress?

(1) $84
(2) $88
(3) $90
(4) $91

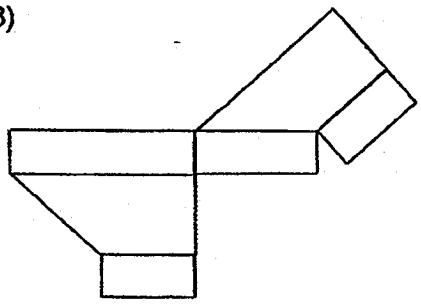
15. Which of the following is the net of the cuboid below?



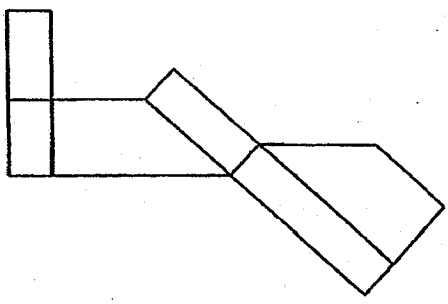
(1)



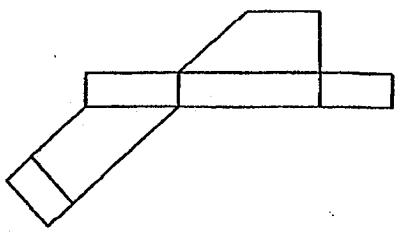
(3)



(2)



(4)



End of Booklet A

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SINGAPORE CHINESE GIRLS' SCHOOL

PRELIMINARY EXAMINATION 2018

PRIMARY 6

MATHEMATICS
PAPER 1

BOOKLET B

Name : _____( )

Class : Primary 6

24 August 2018

Paper 1	Mark attained	Max Mark
Booklet B		25

15 Questions
25 Marks

Total Time for Booklets A and B: 50 min

INSTRUCTIONS TO CANDIDATES

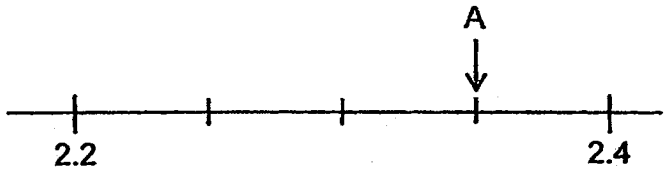
Do not open this booklet until you are told to do so.
Follow all instructions carefully.
Answer all questions.
You are not allowed to use a calculator

Booklet B

Questions **16** to **20** carry **1** mark each. 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 column

16. Find the value of A.



Ans: _____

17. Round off 1.095 to the nearest hundredth.

Ans; _____

18. Find the average of 1.51, 2.02 and 3.4.

Ans: _____

3

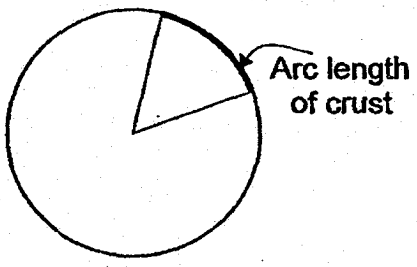
19. Express 0.85 as a percentage.

Do not write this column

Ans: _____ %

---

20. A pizza with a radius of 7 cm is shared equally among x people. What is the arc length of the crust each person will get? Express your answer in terms of x. (Take $\pi = \frac{22}{7}$)



Ans: _____ cm

2

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 i this column

21. Use all the digits 3,4,5,8 to form
    a) largest even number, and
    b) a number closest to 5000.

Ans: (a) _____

(b) _____

22. Min Leng had 2 ℓ of milk. She poured milk into 4 equal glasses and realised that she had $1\frac{2}{5}\ell$ left. How much milk did she pour into each glass?

Ans: _____ ℓ

4

23. $\frac{4}{9}$ of a number is 32. What is the number?

Do not write in this column

Ans: _____

24. $\frac{1}{6}$ of Pauline's money is equal to $\frac{2}{3}$ of Sandra's money. How much money does Pauline have if she has $90 more than Sandra?

Ans: $_____

4

25. The total surface area of a cube is 54 cm^2. Find the volume of the cube.

Do not write this column

Ans: _____ cm^3

---

26. Donna has an elder brother. Her brother is 6 years more than twice of Donna's age. How old is Donna if their total age 30?

Ans: _____

4

27. Every time Danny saves $0.50, his father would add another $0.20 to his savings. How much did his father put into his savings if Danny had $14 in his savings?

Do not write this column

Ans: $_____

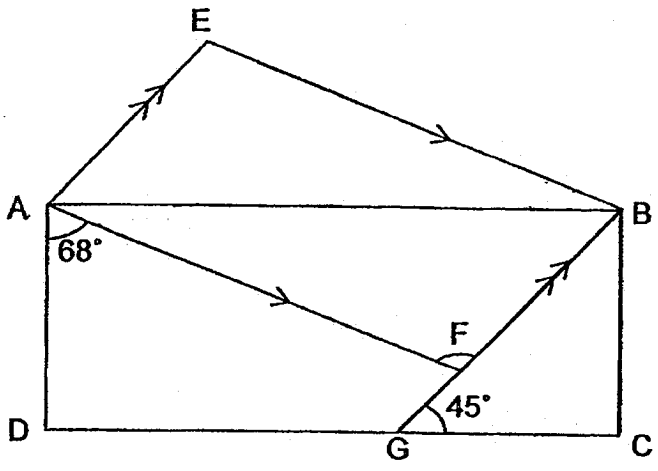
28. The perimeter of the rectangle is 6 times its breadth. What is the area of the rectangle if the length is 12 cm?

Ans: _____ cm^2

4

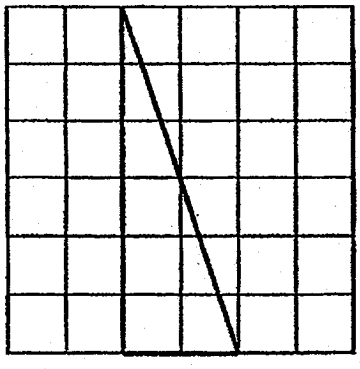
29. The figure below is made up of rectangle ABCD, parallelogram AEBF and isosceles triangle BCG. $\angle DAF$ is 68° and $\angle BGC$ is 45°. Find $\angle AFB$.

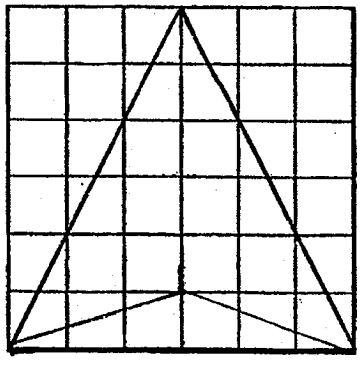
Do not write this column



Ans:_____°

30. Draw an isosceles triangle with half the area as the triangle shown below.





4

End of Booklet B

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SINGAPORE CHINESE GIRLS' SCHOOL

PRELIMINARY EXAMINATION 2018

PRIMARY 6

MATHEMATICS

PAPER 2

Name : _____( )

Class : Primary 6

24 August 2018

	Mark	Max Mark
Paper 2		55

Parent's Signature

17 Questions
55 Marks

Total Time For Paper 2: ~~1 h 40 min~~

INSTRUCTIONS TO CANDIDATES

Do not open this booklet until you are told to do so.
Follow all instructions carefully.
Answer all questions.
You **are allowed** to use the calculator

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

Do not write in this column

1. There are 16 boys and 25 girls in the class. 25% of the boys and 40% of the girls wore spectacles. How many students wore spectacles?

Ans: _____

2. The average of height of 3 children is 1.25 m. A 4th child joins the group. What is the average height of the 4 children if the 4th child is 1.33 m?

Ans: _____ m

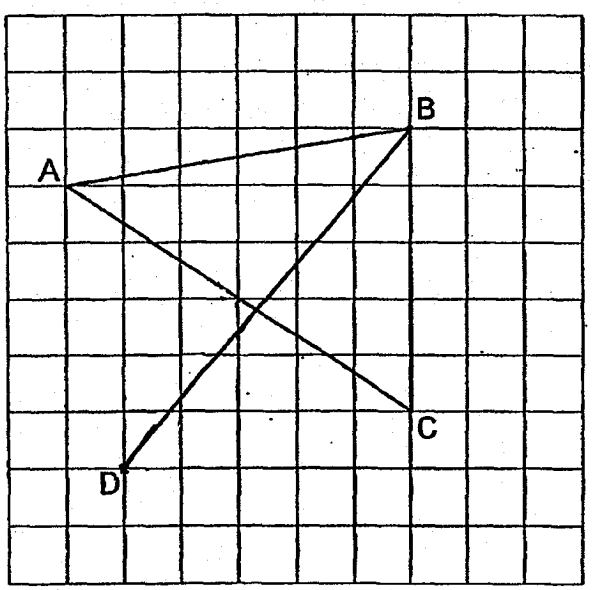
4

3. Mr Lim has a bookshelf which can be fully packed with either 18 school files or 42 exercise books. Mr Tan also has an identical bookshelf. If Mr Tan has 14 exercise books in his bookshelf, how many school files are needed to fill up the bookshelf?

Do not write in this column

Ans: _____

4. Triangle ABC is drawn in the grid below.
   a) Measure ∠ACB.
   b) Draw a line perpendicular to line AC that touches point D.

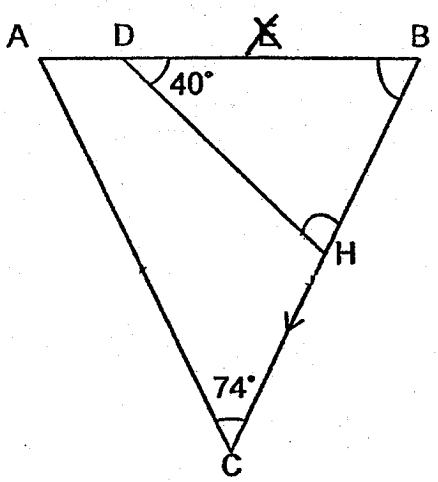


Ans: (a) _____ ° [1]

4

5. In the figure below, ABC is an isosceles triangle where AC is equal to BC. ∠ ACB is 74° and ∠BDH is 40°. Find ∠DHC.

Do not write in this column



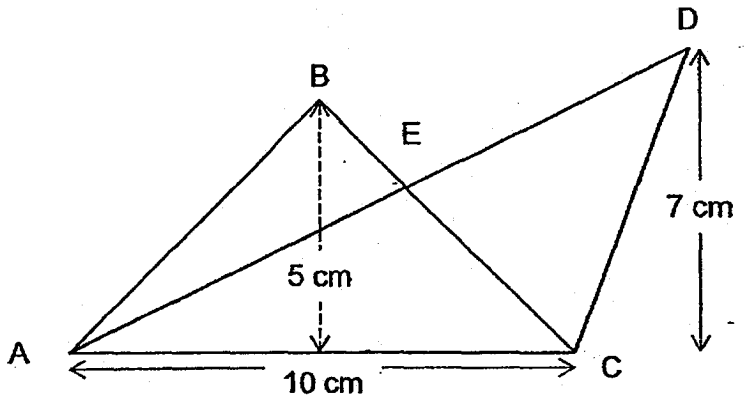
Ans: _____°

2

For questions **6** to **17**, show your working clearly in the space below each question and write your answers in the spaces provided. The number of marks awarded is shown in brackets [ ] at the end of each question or part-question. **(50 marks)**

Do not write in this column

6. The figure below shows 2 overlapping triangles, ABC and ACD. Find the area of the figure given that the area of Triangle AEC is 15 cm^2.



Ans: _____ [3]

3

Do not write in this column

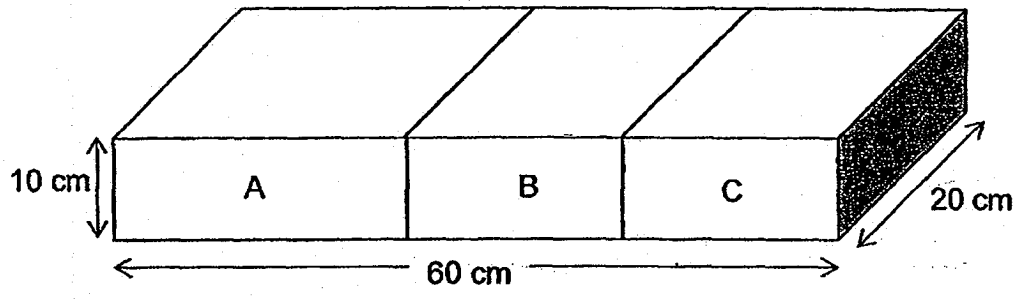
7. At a stationery fair, Cailin bought 4 more pens than files. Each pen costs $2 and each file costs $5. She spent $28 more on files than pens. How many pens did Cailin buy?

Ans: _____ [3]

3

Do not write in this column

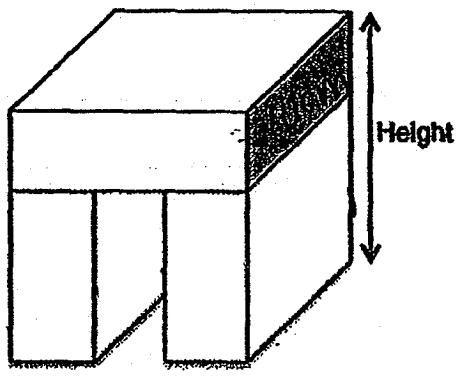
8. Mr Ali wanted to make a stool from a block of wood, 10 cm by 60 cm by 20 cm, as shown below. He cuts the wood into 3 parts, A, B and C in the ratio of 4 : 3 : 3.



He then nails the 2 smaller pieces to part A as shown below.

(a) Find the height of the stool.

(b) What is the **lowest** possible height if he were to stack 5 such stools, one on top of another?



Ans: (a) _____ [2]

(b) _____ [1]

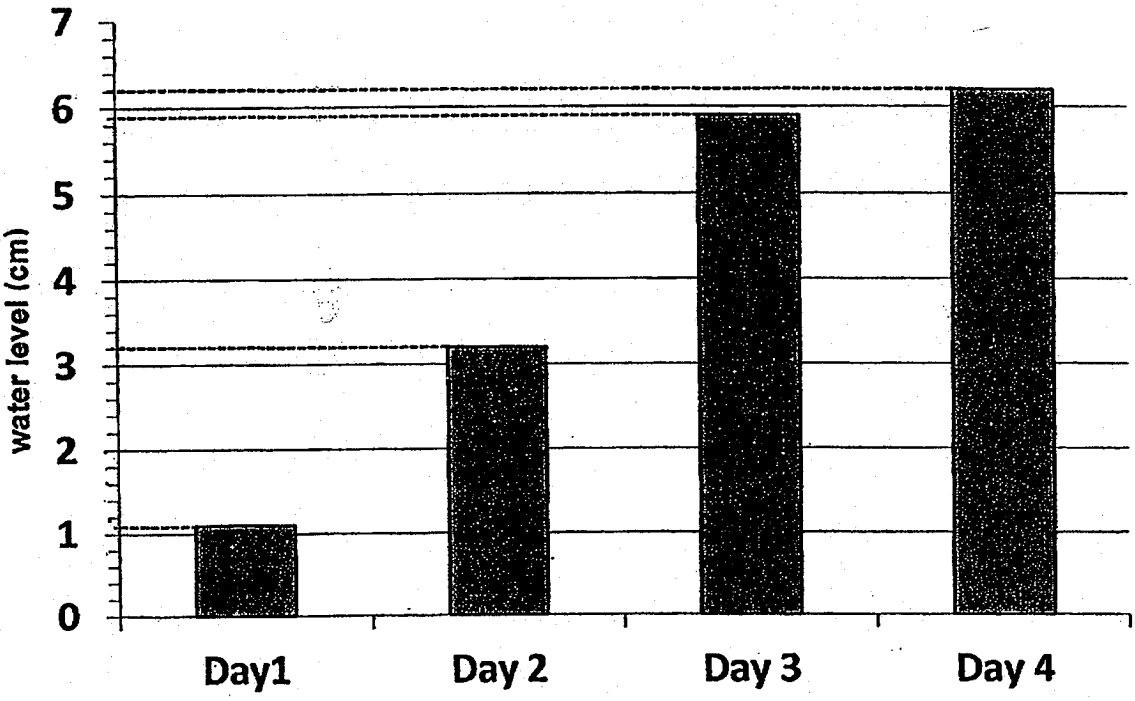
3

9. Mr Chee wanted to measure the amount of rainfall during a rainy season. He placed an empty beaker and observed the water level of the beaker and the results are shown in the graph below.

(a) What is the increase in water level from Day 1 to Day 2?

(b) Find the average water level in the beaker over 4 days.

Do not write in this column



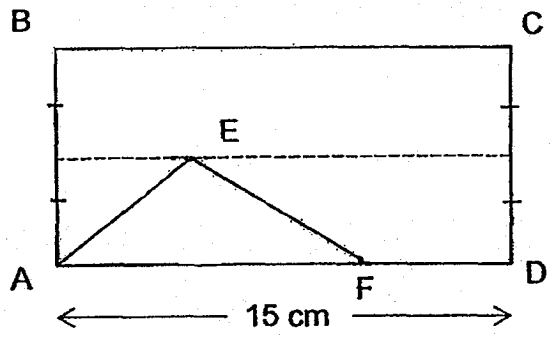
Ans: (a) _____ [1]

(b) _____ [2]

3

10. The figure below, not drawn to scale, is made up of a rectangle ABCD and a triangle AEF. The ratio of the area of rectangle to the area of triangle is 6 : 1 . Find length AF given that the length of the rectangle AD is 15 cm.

Do not write in this column



Ans: _____ [3]

3

11. Andrea baked y mini-cupcakes on Monday and five times as many on Tuesday. She then kept $\frac{1}{3}$ of the mini-cupcakes for her family and friends and packed the remaining mini-cupcakes into packets of 3 and sold them at $5 per packet at a school carnival.

(a) Express the amount of money Andrea earned in terms of y.

(b) Given that $y = 75$, how much did she earn for the carnival?

Do not write in this column

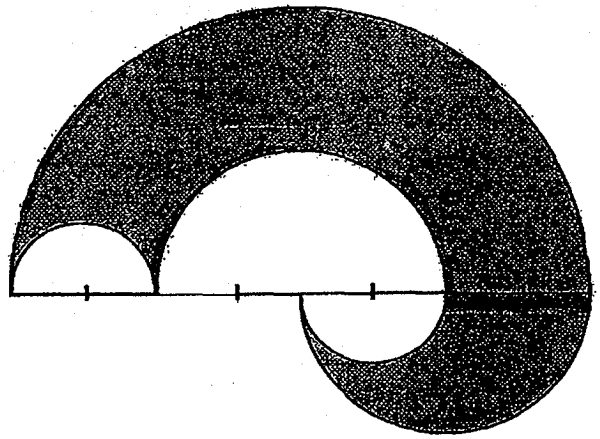
Ans: (a)_____ [2]

(b)_____ [2]

4

12. The figure below is made up of semi-circles of 3 different radii. The radius of the largest semi-circle is 21cm. Find the area of the shaded figure
Round off your answers to 2 decimal places.

Do not write in this column



Ans: _____ [4]

4

13. Hendry and Jacky were at Town A and Town B respectively, 39 km apart. Hendry started driving towards Town B at a speed of 65 km/h. 6 minutes later, Jacky started driving towards Town A and eventually, they drove past each other at the midpoint of Town A and B. Find Jacky's speed.

Do not write in this column

Ans: _____ [4]

4

14. There were red, blue and green and yellow marbles in a bag. The number of red marbles is 30% of the number of blue and green marbles. The ratio of the number of blue, green and yellow marbles to the number of the total number of marbles in the bag is 5 : 6. Given that there are 54 red marbles in the bag, how many yellow marbles are there in the bag?

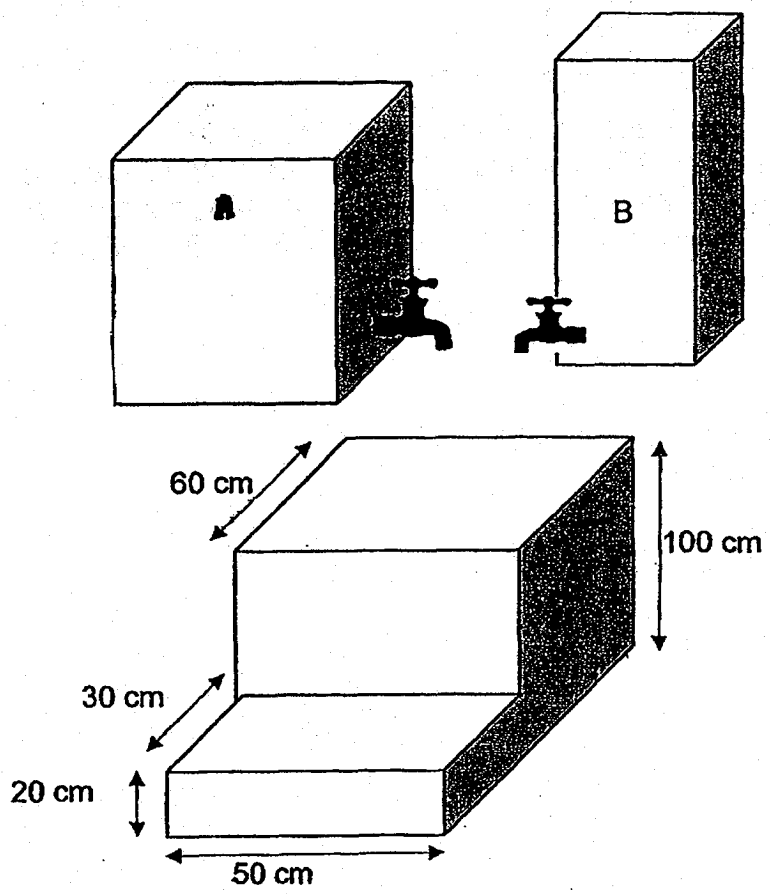
Do not write in this column

Ans: _____ [4]

4

15. Mrs Wee has a cubic container A completely filled with water. Water flowed out from container A into container C as shown below. At the same time, water from container B was also filling container C at a rate of 7200 cm^3 per minute. After 10 minutes, the water level in both containers A and C is half of the height of their containers. Find the length of one side of container A.

Do not write i this column



Ans: _____ [4]

4

Do not write in this column

16. A family of 5 was considering where to go for an affordable dinner.

Restaurant A	**Restaurant B**
10% discount on the 4th diner Buffet price: $40 per person *-No Service Charge-*	*10% Service Charge applicable*

(a) What is the average cost per person if they dined at Restaurant A?

(b) What is the maximum amount they should spend at Restaurant B before the service charge, such that their total bill would be at least $10 less than what they would spend at Restaurant A? (Round off your answer to the nearest dollar.)

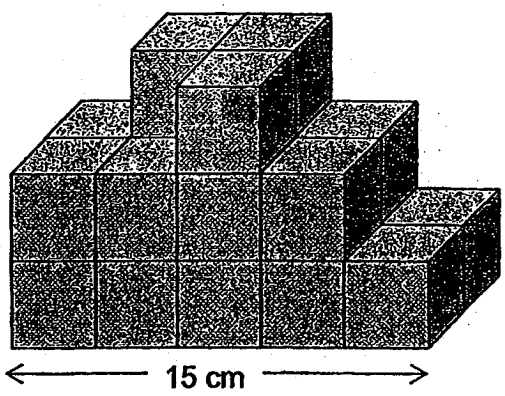
Ans: (a)_____ [2]

(b)_____ [3]

5

17. The figure below is made up of 21 identical cubes. Philip decided to paint the exposed surface area, including the surface area at the bottom of the figure.

Do not write in this column



a) What is the total area that Philip painted?
b) Find the number of surfaces that are **not** painted.

Ans: (a)_____ [3]

(b)_____ [2]

End of Paper 2

~ Please check your work thoroughly. ~

5

SCHOOL : SCGS PRIMARY SCHOOL
LEVEL : PRIMARY 6
SUBJECT : MATH
TERM : 2018 PRELIM

PAPER 1 BOOKLET A

Q 1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
4	1	2	4	2	1	4	2	2	4

Q 11	Q12	Q13	Q14	Q15
3	4	3	2	2

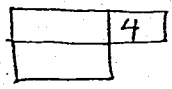
PAPER 1 BOOKLET B

Q16)	2.35
Q17)	1.10
Q18)	2.31
Q19)	85%
Q20)	44/x
Q21)	a)8534 b)4853
Q22)	3/20L
Q23)	72
Q24)	$120
Q25)	27cm3
Q26)	8
Q27)	$4
Q28)	72cm2
Q29)	**113°**
Q30)	

2018 Prelims Maths Paper 2

1) 14 3) 12 5) 93°
2) 1.27m Ans) 56° 6) 45cm²

7) No. of pens / No. of files

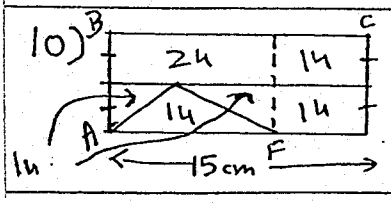


4 pens — 4 × $2 = $8
If she had not bought 4 more pens, diff — $28 + $8 = $36
Diff between 1 file and 1 pen — $5 − $2 = $3
No. of files — $\frac{\$36}{\$3} = 12$
No. of pens — 12 + 4 = 16

8a) 10 units — 60cm
3 units — $\frac{60cm}{10} \times 3 = 18cm$
Height — 10cm + 18cm = 28cm
8b) Lowest — 20cm × 5 = 100cm

9a) 2.1cm 9b) 4.1cm

10)

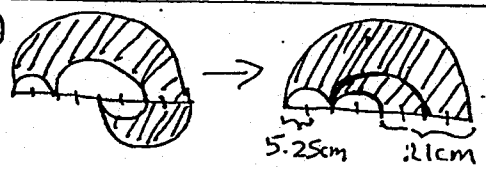


AF — $\frac{2}{3} \times 15cm = 10cm$

11a) Total — $y + 5xy = 6y$
Packed — $\frac{2}{3} \times 6y = 4y$
No. of packets — $\frac{4y}{3}$
Earned (in terms of y) — $\frac{4y}{3} \times \$5 = \frac{\$20y}{3}$

11b) Earned — $\frac{\$20 \times 75}{3} = \$500$

12)



Radius of small unshaded semi-circle — $\frac{21cm}{4} = 5.25cm$
Large semi-circle — $\frac{1}{2} \times \pi \times 21cm \times 21cm = 220.5\pi cm^2$
Small circle — $\pi \times 5.25cm \times 5.25cm = 27.5625\pi cm^2$
Shaded — $220.5\pi cm^2 - 27.5625\pi cm^2$

13) Dist travelled by each person — $\frac{39km}{2} = 19\frac{1}{2}km$
Time taken by Henry — $19\frac{1}{2}km \div 65km/h = \frac{3}{10}h$
Time taken by Jacky — $\frac{3}{10}h - \frac{1}{10}h = \frac{1}{5}$
Jacky's speed — $19\frac{1}{2}km \div \frac{1}{5}h = 97\frac{1}{2}km/h$

14) R : B+G = 3 : 10
B+G+y : Total : R = 5 : 6 : 1) ×3
= 15 : 18 : 3
3 units — 54
1 unit — $\frac{54}{3} = 18$
Yellow units — 15 units − 10 units = 5 units
5 units — 18 × 5 = 90

15) Total volume of water in
— 50cm × 30cm × 20cm + $\frac{1}{2}$ × 50cm × 60cm × 30cm
= 180 000cm³
Volume of water from A
— 180 000cm³ − 7200cm³ × 10
= 108 000cm³
Capacity of A — 108 000cm³ × 2
= 216 000cm³
60cm × 60cm × 60cm = 216 000cm³
Length of A — 60cm

16a) Total of 5 — $40 × 4 + $\frac{90}{100}$ × $40
= $196
Average — $\frac{\$196}{5} = \$39.20$

16b) After 10% service charge — $196 − $10
= $186
Before 10% service charge — $\frac{\$186}{110} \times 100 \approx \$169$

17a) Length of 1 cube — $\frac{15cm}{5} = 3cm$
Area of 1 square face — 3cm × 3cm = 9cm²
Total painted faces — 11 × 2 + 10 × 2 + 6 × 1
= 54
Total painted area — 54 × 9cm² = 486cm²

17b) Total faces of 21 cubes — 21 × 6
= 126
Not painted — 126 − 54