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SINGAPORE CHINESE GIRLS' SCHOOL

PRELIMINARY EXAMINATION 2015

PRIMARY 6

MATHEMATICS
PAPER 1

BOOKLET A

Name : _____( )

Class : Primary 6 SY / C / G / SE / P

26 August 2015

		Marks attained	Max Mark
Paper 1	Booklet A		20
	Booklet B		20
Paper 2			60
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 419.675?

   (1) 7 tens
   (2) 7 tenths
   (3) 7 hundreds
   (4) 7 hundredths

2. Which of the following is the most likely ratio of the length of the Singapore flag to its breadth?

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

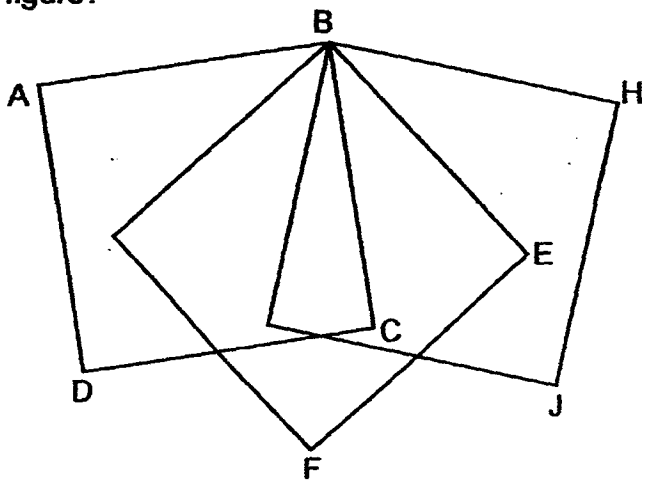
3. Which of the following has the biggest value?

   (1) $\frac{2}{7}$
   (2) 0.22
   (3) 32%
   (4) $\frac{1}{5}$

4. Which of the following number is the largest common factor of 6 and 12?

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

5. The following figure is made up of three overlapping squares. How many pairs of perpendicular lines are there in the figure?



(1) 6
(2) 9
(3) 12
(4) 15

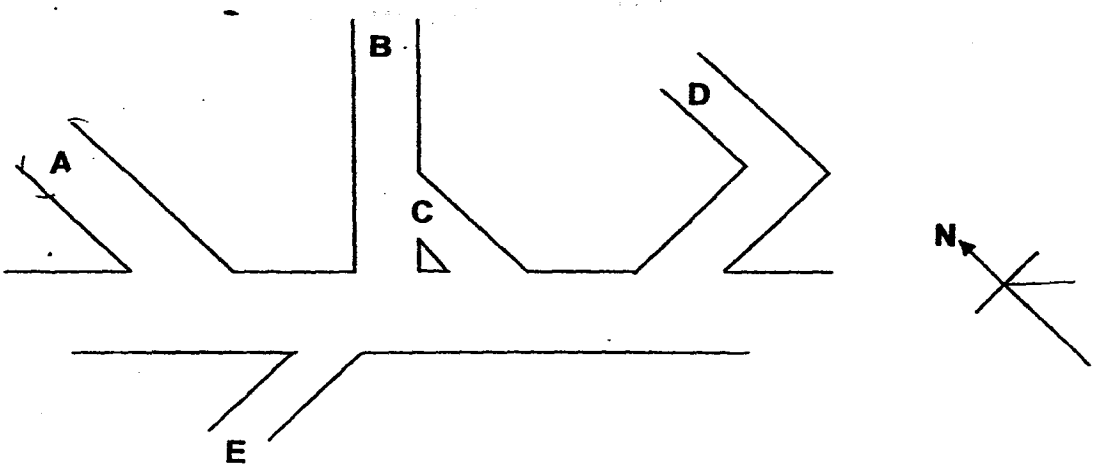
6. Express 3 minutes as a percentage of $2\frac{1}{2}$ hours.

(1) $1\frac{1}{5}\%$
(2) 2%
(3) 12%
(4) 120%

7. In the number line shown below, which value is closest to the letter A?

(1) 67.4
(2) 67.7
(3) 68.1
(4) 68.8

8. The figure shows a road map.



Devi started walking southward from one of the points A, B, C and D. She then turned southeast and continued walking. Finally, she walked towards the west and reached her destination at point E. At which point did Devi start her journey?

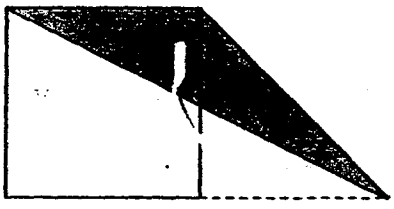
(1) A

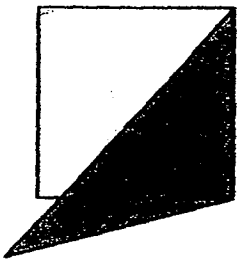
(2) B

(3) C

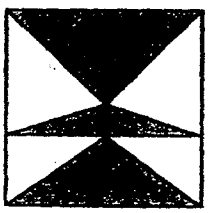
(4) D

9. The squares shown below are identical. Which of the following shaded areas is more than half the area of the square?

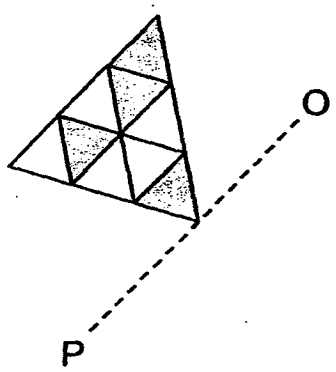
(1) 

(2) 

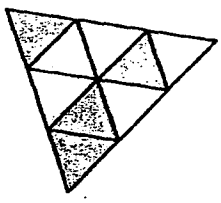
(3) 

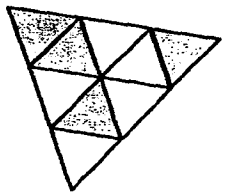
(4) 

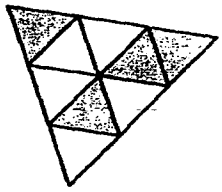
10. The figure below shows the top half of a symmetric figure. OP is the line of symmetry.

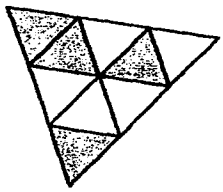


Which of the following completes the symmetric figure?

(1) 

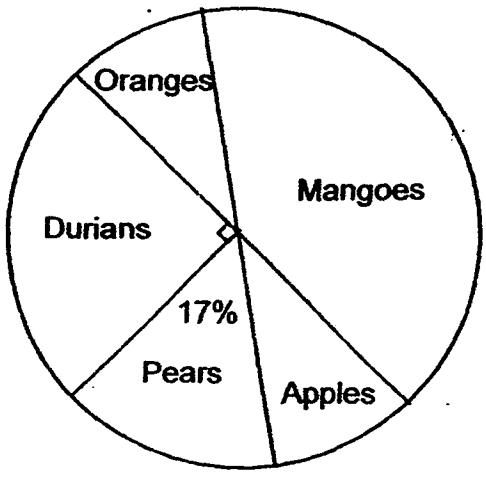
(2) 

(3) 

(4) 

11. The pie chart shows the favourite fruits of a group of people. 50% of the people like durians, oranges and pears. 33% of the people like apples, oranges and pears. If 72 more people like pears than oranges, what is the total number of people in the group?

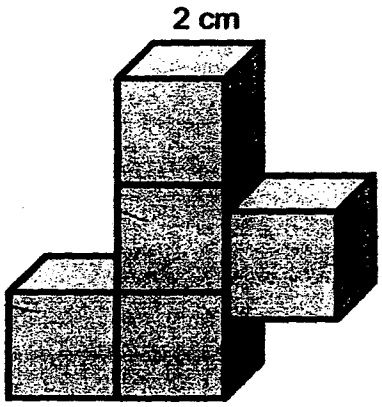
(1) 288
(2) 450
(3) 800
(4) 900



12. The ratio of the number of guppies to the number of angelfish in a pond is m : 3. There are 48 angelfish in the pond. How many fishes are there in the pond altogether?

(1) 48m + 3
(2) 16m + 48
(3) 16m + 3
(4) 16m

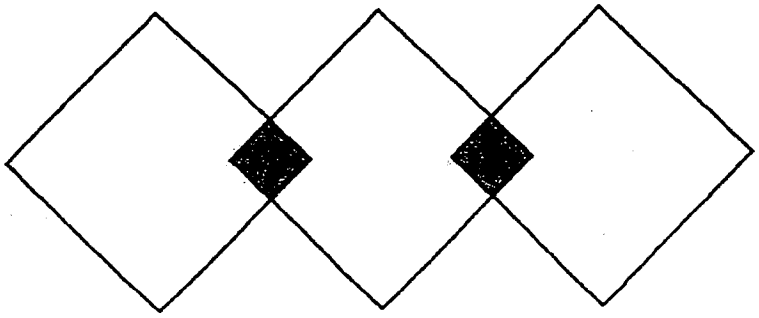
13. The solid below is made up of five 2-cm cubes. James sprayed the whole solid with paint. What area of the solid is covered with paint?



(1) 64 cm^2
(2) 72 cm^2
(3) 80 cm^2
(4) 88 cm^2

14. The figure below shows 3 overlapping identical squares, with two overlapped areas of the same size. If the area of each big square is 120 cm^2 and the area of the whole figure is 300 cm^2, what is the area of each overlapped part?

(1) 15 cm^2
(2) 20 cm^2
(3) 30 cm^2
(4) 60 cm^2



15. Box B contained 50% more peaches than Box A. Box C contained 25% as many peaches as Box A. An equal number of peaches were transferred from Box A and Box B into Box C. Now, the number of peaches in Box C is thrice its original number. What is the ratio of the number of peaches in Box A to the number of peaches in Box B to the number of peaches in Box C in the end?

(1) 1 : 3 : 3
(2) 3 : 5 : 3
(3) 4 : 1 : 6
(4) 4 : 7 : 6

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SINGAPORE CHINESE GIRLS' SCHOOL

PRELIMINARY EXAMINATION 2015

PRIMARY 6

MATHEMATICS
PAPER 1

BOOKLET B

Name : _____ **(** **)**

Class : Primary 6 SY **26 August 2015**

Paper 1	Mark attained	Max Mark
Booklet B		**20**

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

Name:_____( ) Class: P6 SY / C / G / SE / P

Do not write in this column

Questions **16** to **25** carry 1 mark each. Write your answers in the spaces provided. For questions which require units, give your answers in the units stated. **(10 marks)**

16. Find the value of $3 - \frac{1}{2} - \frac{3}{5}$

(Express your answer as a fraction in its simplest form)

Ans: _____

17. Find the value of 2763 ÷ 9.

Ans: _____

18. 143 ÷ 100 = _____ × 10.

Ans: _____

3

19. Evaluate $2 \times 35 + (11 - 6) \div 5$

Do not write i this column

Ans: _____

---

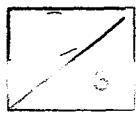
20. Lynn and Mel shared some paper clips equally. Mel used 18 of her clips, after which the ratio of the number of Lynn's clips to the number of Mel's clips became 3 : 1. How many clips did each of the girls have at first?

Ans: _____

---

21. Cindy baked 2 pizzas. She kept $\frac{3}{5}$ of a pizza for herself and shared the remaining pizzas equally among her friends. If each of her friends received $\frac{1}{5}$ of a pizza, how many of her friends received the pizzas?

Ans: _____



22. A rectangular tank is $\frac{1}{3}$ filled with water. If another 160 litres of water is needed to fill the ~~container~~ tank to its brim, what is the capacity of the tank?

Do not write in this column

Ans: _____ ℓ

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23. Mrs Goh packed 1.5 kg of flour equally into 8 small packets and had some flour left. How much flour had she left?

Ans: _____ g

2

24. Joy spent 20% of her money while Ken spent 25% of his money. If they spent the same amount of money, what is the ratio of Joy's money to Ken's money? (Express your answer in its simplest form)

Do not write i this column

Ans: _____

25. A number, when divided by 6, gives a quotient of 13 and a remainder of 4. What is this number?

Ans: _____

2

Questions **26** to **30** carry 2 marks each. Show your working clearly in the space for each question 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 column

26. Mr Tan started painting his house at 8.15 a.m. He spent $3\frac{1}{2}$ h painting before lunch. He took an hour's lunch break and spent another $2\frac{3}{4}$ h painting after lunch. At what time did he stop painting?

Ans: _____ p.m.

27. Jaslyn baked some almond cookies and butter cookies. She gave away ~~30%~~ of the almond cookies. The number of butter cookies that she ate was $\frac{1}{2}$ the number of almond cookies given away. If Jaslyn had 42 almond cookies left, how many butter cookies did she eat?

Ans: _____

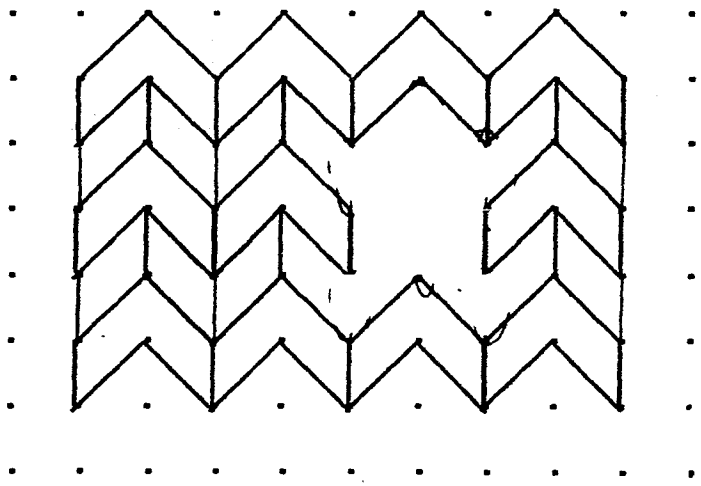
4

28. The following shows a sequence of numbers starting with 13. What is the value of the 100th number of the sequence?

Do not write i this column

Ans: _____

29. There are 5 missing unit shapes in the tessellation below. Draw the missing unit shapes clearly in the grid, such that all unit shapes are joined together.



30. Some marbles were distributed equally among 8 boys. Each of these boys gave away 12 marbles. In the end, the total number of marbles that the boys had was equal to the total number of marbles 5 of the boys had at first.
How many marbles did each boy have at first?

Do not write in this column

Ans: _____

End of Paper 1

2

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SINGAPORE CHINESE GIRLS' SCHOOL

PRELIMINARY EXAMINATION 2015

PRIMARY 6

MATHEMATICS

PAPER 2

Name : _____ **26 August 2015**

Class : Primary 6 SY

	Mark	Max Mark	Parent's Signature
Paper 2		**60**	

18 Questions
60 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.

Questions **1** to **5** carry 2 marks each. Show your working clearly in the space below each question 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 column

1 Mrs Yong prepared a pot of coffee using coffee powder, creamer and sugar in the ratio 6 : 2 : 1. If she used 18.2 g of creamer, how much more coffee powder than sugar did she use?

Ans: _____ g

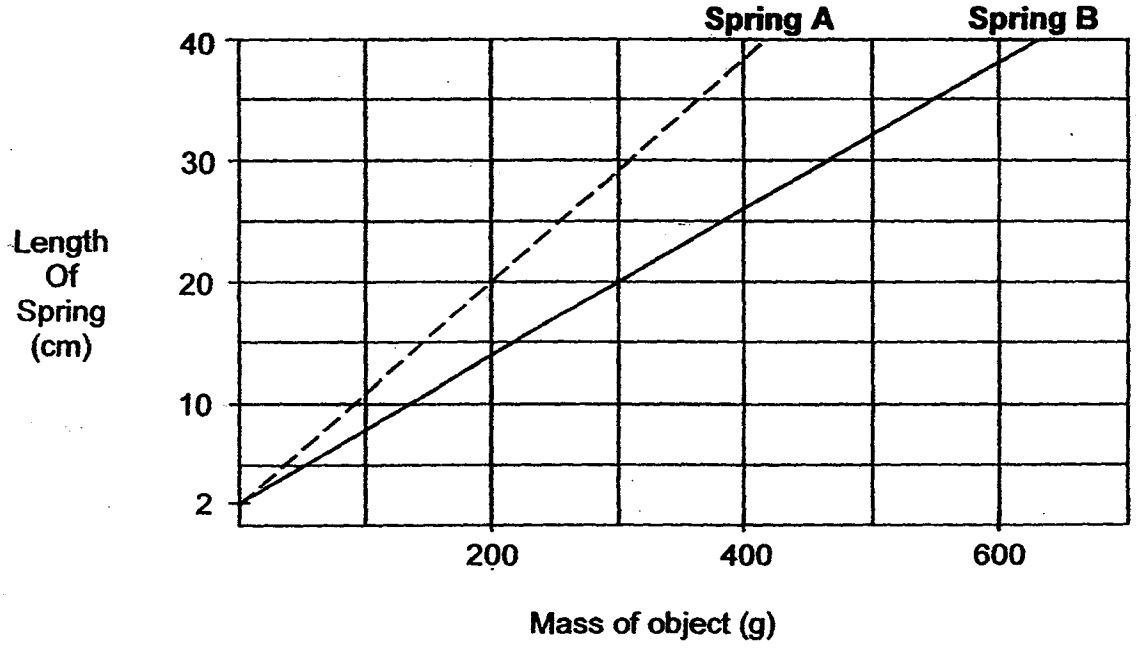
2 Jessie folded a total of 230 paper cranes in 5 days. Each day, she folded 8 more paper cranes than the previous day. How many paper cranes did she fold on the last day?

Ans: _____

4

Do not write in this column

3. The graph below shows the length of two springs when an object was hung on each spring. Find the length of each spring that was stretched for every 10g of the object.



Ans: Spring A: _____ cm [1]

Spring B: _____ cm [1]

4. Meiling jogged along a path at a constant speed of 110 m/min. Five minutes after she started jogging, Wenshan started jogging along the same path at 30 m/min faster than Meiling. How long will Wenshan take to jog 170 m more than Meiling?

Ans: _____ min

4

5. In the figures below, two corners of a triangular piece of paper are folded inward, then outward to form a symmetrical shape as shown in Figure B. $\angle PQR = 11°$ and $\angle PQS = 23°$. Find $\angle TQR$.

Do not write in this column

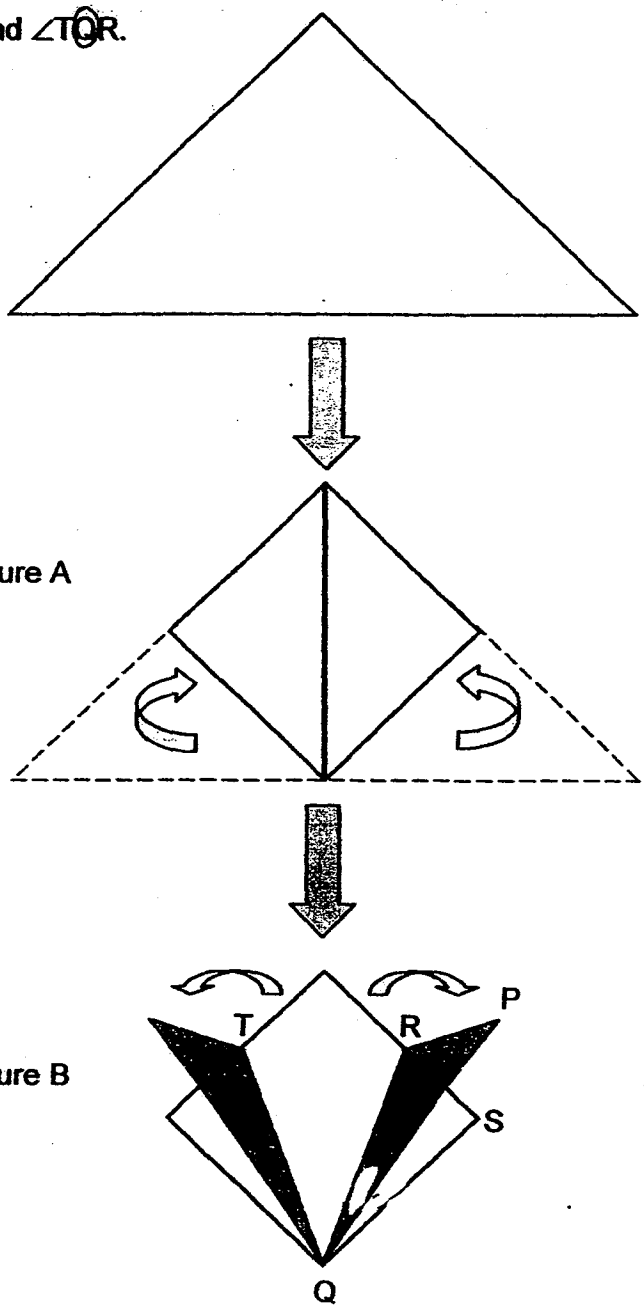


Figure A

Figure B

Ans: _____ °

2

For questions **6** to **18**, 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)**

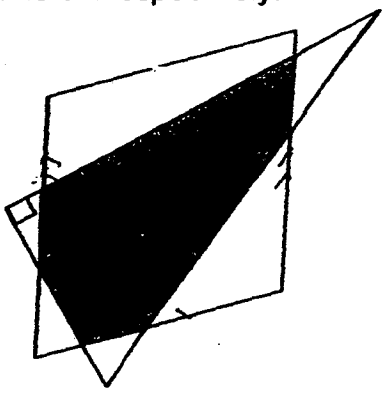
Do not write this column

6. Madam Rosnah prepared some dough for baking. She divided the dough into equal portions, each weighing 25 g. If she had divided the dough into 20-gram portions instead, she would have 9 more portions of dough. What is the total amount of dough that Madam Rosnah had prepared? (Express your answer in kg)

Ans: _____ [3]

7. The figure below is made up of a right-angled triangle and a rhombus overlapping each other. $\frac{2}{9}$ of the triangle and $\frac{1}{2}$ of the rhombus are unshaded.

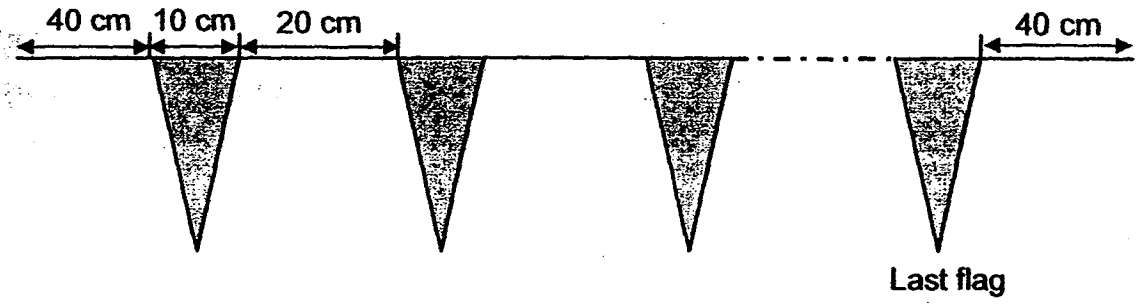
The base and height of the triangle are 18 cm and 28 cm respectively.
What is the area of the rhombus?



Ans: _____ [3]

Do not write in this column

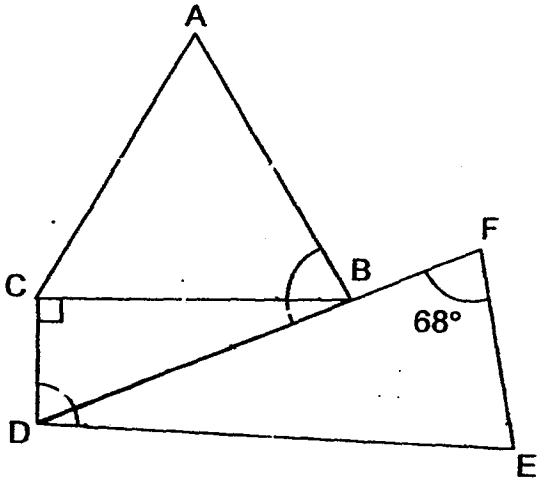
8. Billy used a piece of string to hold some coloured flags, each 10 cm wide, as shown in the diagram below. Each flag was strung 20 cm apart from one another. Billy also gave an allowance of 40 cm each before the first flag and after the last. If the length of the string used was 13.2 m, how many flags did he string altogether?



Ans: _____ [3]

---

9. The figure below is made up of three triangles. ABC is an equilateral triangle, BCD is a right-angled triangle and DEF is an isosceles triangle. $\angle EFD = 68°$. Find the sum of $\angle CDE$ and $\angle ABD$.



Ans: _____ [3]

6

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10. Kenneth leaves his home at the same time every morning and cycles to school. He usually cycles at a speed of 300 m/min and reaches school 6 minutes before the school bell rings. On days when he was tired, he cycled at a speed of 200 m/min but reaches school 3 minutes after the school bell rings.
Find the distance between his home and school. (Express your answer in km)

Do not write in this column

Ans: _____ [3]

3

11. The number of children in a town decreased to 8827, while the number of adults increased by 42% to 15 194. The total number of people decreased by 259.

(a) What is the increase in the number of adults?

(b) What is the percentage decrease in the total number of children?

Do not write in this column

Ans: (a) _____ [1]

(b) _____ [3]

4

12. There were 500 more fiction books than non-fiction books in a bookshop. When more books were added to the bookshop, the number of fiction books increased by $\frac{1}{4}$, while the number of non-fiction books increased by $\frac{2}{3}$. The total number of books became 3145. How many non-fiction books were there after the increase?

Do not write in this column

Ans:_____ [4]

4

13. Maria bought 4 identical plates with $\frac{3}{5}$ of her money. She bought 2 more of the same plate and 5 identical cups with her remaining money.

(a) If Maria decided to spend all her money on the cups instead, how many of those cups could she buy altogether?

(b) If each cup cost $1.80, how much money did Maria have at first?

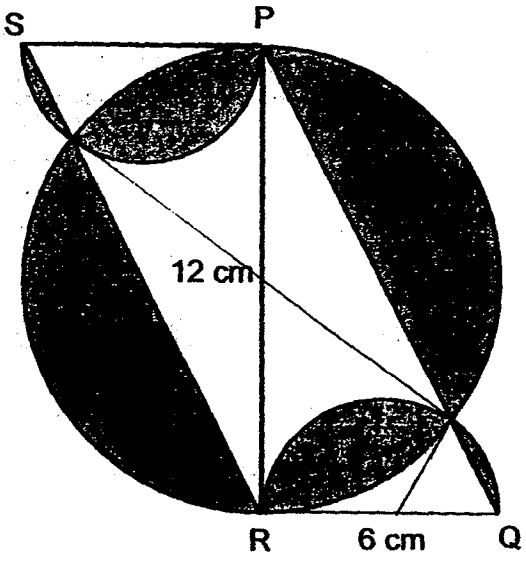
Do not write in this column

Ans: a) _____ [3]

b) _____ [1]

14. The figure below is made up of a circle, a parallelogram and two identical semi-circles. The diameter of the circle, PR, is 12 cm and the diameter of the semi-circles is 6 cm. PR is perpendicular to SP and RQ.
Find the area of the shaded parts. (Take $\pi = 3.14$)

Do not write this column

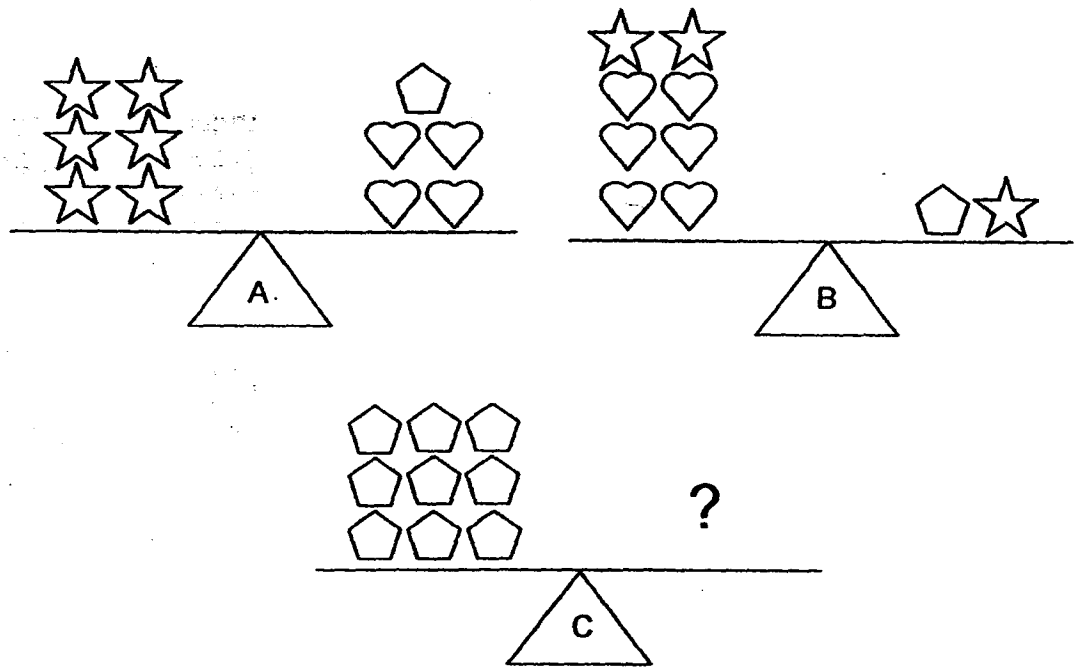


Ans: _____ [4]

4

15. The diagrams below show the number of objects needed to keep the weighing scales balanced.

How many ♡ are needed to keep weighing scale C balanced?



Do not write in this column

Ans: _____ [4]

16. Mr Halim picked thrice as many strawberries as tomatoes from a fruit farm. While sorting the fruits, he found that only 45% of the fruits were edible. The ratio of the number of edible strawberries to the number of edible tomatoes was 2 : 7. There were 395 more edible tomatoes than edible strawberries.

(a) What was the total number of strawberries and tomatoes that were edible?

(b) How many strawberries did Mr Halim pick at first?

Do not write this column

Ans: (a) _____ [2]

(b) _____ [3]

17. Machine A packed 92 packets of biscuits in one minute. Ten minutes after Machine A started packing the biscuits, Machine B was activated, packing 130 packets of biscuits in one minute.

Do not write in this column

(a) How many minutes did Machine B take to pack 2120 packets of biscuits more than Machine A?

(b) How many packets of biscuits did both machines pack altogether for that duration?

(c) Given that both machines stopped packing at 15 45, at what time did Machine A start to pack the biscuits? (Give your answer in the 24-hour clock format)

Ans: (a) _____ [2]

(b) _____ [2]

(c) _____ [1]

5

18 Dorcas bought some bags from a wholesaler at $4 each and sold them at $10 each. All her customers bought either one or five bags from her. Customers who bought five bags from her were given one free bag.

Do not write this column

(a) Peter bought some bags and was given 140 free bags. How many bags did he receive in all?

(b) At the end of the day, Dorcas had earned $3736 after deducting what she had paid to the wholesaler. Assuming only Peter bought multiple bags, how many customers bought only one bag from Dorcas?

Ans: (a) _____ [2]

(b) _____ [3]

5

End of Paper

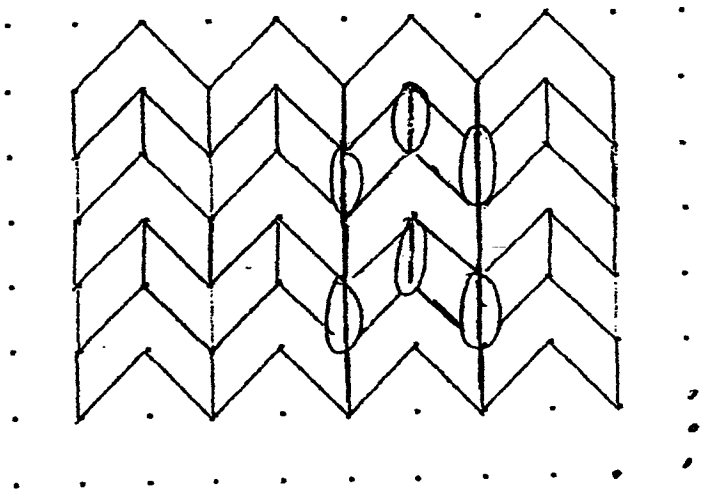
— Please check your work thoroughly —

EXAM PAPER 2015
LEVEL : PRIMARY 6
SCHOOL : SINGAPORE CHINESE GIRLS' SCHOOL
SUBJECT : MATHS
TERM : PRELIMINARY EXAMINATION

PAPER ONE

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

Q16. $1\frac{9}{10}$ → $3 - \frac{1}{2} - \frac{3}{5} = 2\frac{10}{10} - \frac{5}{10} - \frac{6}{10} = 1\frac{9}{10}$ Q17. 307 Q18. 0.143 Q19. 71
Q20. 27 → 3U – 1U = 2U, 2U → 18, 1U → 18 ÷2=9, 3U → 9 X 3 = 27 Q21. 7
Q22. 240 litre → $\frac{3}{3} - \frac{1}{3} = \frac{2}{3}, \frac{2}{3}$ → 160litre, $\frac{1}{3}$ → 160litre ÷ 2 = 80litre, $\frac{3}{3}$ → $80l \times 3 = 240l$
Q23. 4g → 1500g ÷ 8 = 187 r 4g Q24. 5 : 4 → $\frac{1}{5}J = \frac{1}{4}K, J:K, 5:4$
Q25. 82 → 13 x 6 = 78, 78 + 4 = 82. Q 26. 3.30pm
Q27. 9 → $\frac{3}{10} \div \frac{1}{2} = \frac{3}{10} \times 2 = \frac{3}{5}$, 7U → 42, 1U → 42÷7 = 6, 3U → 6 X 3 = 18, 18÷2 = 9
Q28. 409 → 100 – 1= 99, 99 x 4 = 396, 396 + 13 = 409.
Q29. **SEE PICTURE** Q30. 32 → 12 x 8 = 96, 8 – 5= 3, 3B → 95, 1B → 96 ÷ 3 = 32.



PAPER TWO

Q1. 45.5g → 2 U → 18.2G, 6U – 1U = 5U, 1U → 18.2g ÷ 2 = 9.1g, 5u → 9.1g x 5 = 45.5g
Q2. 62 → 8 X 10 =80, 5u → 230 – 80= 150, ,lU → 150 ÷ 5 = 30, 8 x 4 = 32, last day → 30 + 332 = 62
Q3a. Spring A: 0.9cm. Spring B : 0.6cm → (A) 200g → 20cm – 2cm = 18cm, divide by 20 = (A) 10g → 0.9cm, divide by 30 → (B) 300g → 20cm – wcm = 18cm, (B) 10g → 0.6cm.
Q4. 24min → W speed → 110m/min – 110m/min = 30m, M1min → 110m, M5mins → 110m x 5 = 550m, 170m +550m = 720m, 720m ÷ 30m = 24mins.
Q5. 22° → 11° + 23° = 34°, 34° x 2 = 68°, $\angle TQR$ → 90° – 58° = 22°
Q6. 0.9kg → 20g x 9 = 180g, 80 ÷5 = 36, 36 x 25g =900g = 0.9kg.
Q7. $392cm^2$ → 9u → $\frac{1}{2} X\ 18cm\ X\ 28cm = 252cm^2$, $1U \rightarrow 252cm \div 9 = 28cm^2$, $14u \rightarrow 28CM\ X\ 14 = 392\ cm^2$
Q8. 42 → 13 2m = 1320cm, 1320cm – 40cm-40cm = 1240cm, 1240CM – 10CM-10CM-20CM = 1200CM, 1 grp → 20cm + 10cm = 30cm, Nos. of grp → 1200cm ÷30cm =40 no. of flags → 40 + 2 = 42
Q9. 194° → 180 – 68-68=44, 180-90=90, $\angle CDE + \angle ABD$ → 90 + 44 + 60 = 194
Q10. 5.4km → Speed – 3 : 2 , Time – 2 : 3, lu → 6min + 3min =9mins, Time , 2u → 9mins x 2 = 18mins, Distance → 18m x 300 = 5400m = 5.4km.
Q11a. 4494 → 100% +42% = 142%, 142% → 15194, 1% → 15194÷142=107, 42% → 107 x 42=4494.
Q11b. 35% → decrease in children → 4494 +259=4753, children at first → 8827 + 4753 =13580, percentage decrease → $\frac{4753}{13580} X\ 100\% = 35\%$
Q12. 1440 → 500 + 125= 625, 12u + 3u= 15u, 12u +8u =20u, 20u + 15u = 35u, 35u → 3145 – 625 = 2520

1u → 2520÷35 = 72, 20u →72 x 20 = 1440.

Q13.a. 50 → $\frac{3}{5}$ → 4*p, divide by* 2 → $\frac{3}{10}$→2P, $\frac{2}{5} = \frac{4}{10}$, $\frac{4}{10}$ →$2p + 5c, \frac{4}{10} - \frac{3}{10} = \frac{1}{10}, \frac{1}{10}$ →5C, $\frac{10}{10}$ →$5 \times 10 = 50$

Q13b. $90 → 20c → $1.80 x 20 = =$36, $\frac{4}{10}$ → $36, $\frac{1}{10}$ → $36, $\frac{1}{10}$ → $36 ÷ 4 = $9, $\frac{10}{10}$ → $9 x 10 = $90.

Q14. 69.3cm² →6cm x 12cm = 72cm , 113.04cm² – 72cm² = 41.04cm, $\frac{1}{2}$ x 3.14 x 3cm x 3cm = 14.13cm , 1413cm x 2 = 28.26cm, 41.04cm + 28.26 = 69.3cm.

Q15.72 → $1S + 6H, 1S + 4H = 1S + 6H + 4H = 1S + 10H. 10H = 5S, 2H = 1S, 1S = 2H + 5H = 8H, 9 = 9X 8H = 72$

Q16a. 711 → 7u -2u = 5u, 5u →395, 1u→395 ÷5 = 79, 7u + 2u=9u, 9u→79 x9 =711.

Q16b. 1185 → 15u →79 x 15 = 1185.

Q17.a. 80mins → (A) I min – 92p, (B) 1min → 130p, difference in 1 min → 130p- 92p =38p, 10mins → 92p x 10=920p, 2120p + 920p =3040p, 3040p ÷38p = 80.

Q17b. 17760 →(A) 80mins →92 x 80 = 7360P, (B) 80mins → 130p x 80 = 10400p, total → 7360 + 10400 = 17760. Q17c. 1455 → 80mins + 10mins =90mins. 1545 – 90 mins = 1455.

Q18a. 84° → 140 x 5 = 700, 700 + 140 = 840. Q18b. $96 → 840x $4 =$3360, 700 x $10 – 43360 = $3640, $3736 - $3640 = $96.

THE END