

TMY / KYS / AT / SL / AS

SINGAPORE CHINESE GIRLS' SCHOOL

FIRST SEMESTRAL ASSESSMENT 2018

PRIMARY 6

MATHEMATICS
PAPER 1

BOOKLET A

Name : _____ ()

Class : Primary 6

4 May 2018

		Marks attained	Max Mark	Parent's Signature
Paper 1	Booklet A		20	
	Booklet B		25	
Paper 2			55	
Total Marks		—	100	

15 Questions
20 Marks

Total Time for Booklets A and B: 1 h

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. Round off 32.448 to the nearest tenth.

- (1) 30
- (2) 32.4
- (3) 32.44
- (4) 32.45

2. What is the missing number in the blank?

$$436\,290 = 400\,000 + \underline{\hspace{2cm}} + 290$$

- (1) 36 000
- (2) 36 020
- (3) 36 090
- (4) 36 200

3. Express 71 080 metres in kilometres.

- (1) 7.108 km
- (2) 71.08 km
- (3) 710.8 km
- (4) 7108 km

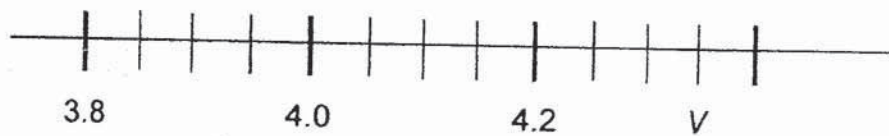
4. What is the value of $38 \div 100 + 6 \div 10$?

- (1) 0.44
- (2) 0.638
- (3) 0.98
- (4) 4.4

5. What is the value of $30 - (6 + 12) \div 3 \times 2$?

- (1) 8
- (2) 2
- (3) 18
- (4) 24

6. In the scale below, what is the value of V ?



- (1) 4.275
- (2) 4.28
- (3) 4.325
- (4) 4.35

7. $225 \times 32 = 200 \times 32 + 10 \times 32 + \boxed{?} \times 32$

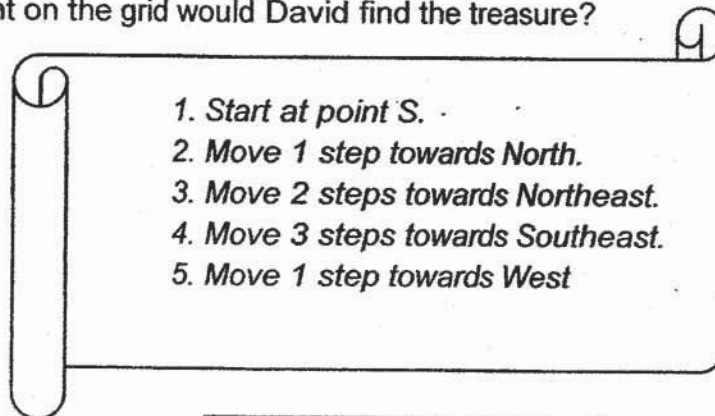
What is the missing number in the box?

- (1) 15
- (2) 22
- (3) 25
- (4) 32

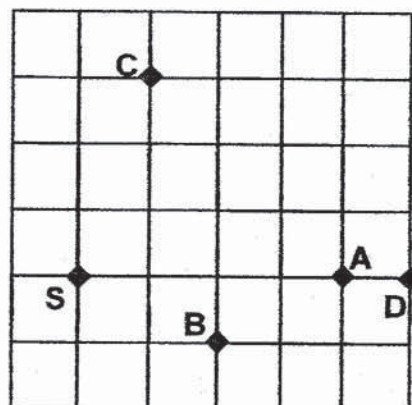
8. Ben received pocket money from his mother each week. This week, his weekly pocket money increased by 20% as his mother had given him \$8 more pocket money. How much pocket money did Ben receive this week?

- (1) \$1.60
- (2) \$32
- (3) \$40
- (4) \$48

9. David took part in a treasure hunt and was given the following instruction sheet. At which point on the grid would David find the treasure?



- (1) A
- (2) B
- (3) C
- (4) D



10. Kumar's watch was faster by 15 minutes.

His watch showed 1.30 p.m. when he left his home to go for a dental appointment.

He travelled for 25 minutes and arrived at the dental clinic just in time.

What was the actual time of his dental appointment?

- (1) 1.40 p.m.
- (2) 1.55 p.m.
- (3) 2.10 p.m.
- (4) 2.25 p.m.

11. Devi had 300 stickers and Nurul had 180 stickers. Devi gave Nurul some of her stickers so that they both have the same number of stickers. What percentage of her stickers did Devi give to Nurul?

- (1) $33\frac{1}{3}\%$
- (2) 25%
- (3) 20%
- (4) 40%

12. Shirley has $\frac{5}{6}$ m of ribbon. After cutting it into several shorter pieces, each $\frac{1}{8}$ m long, she had a remaining piece left. What is the length of the remaining piece?

- (1) $\frac{1}{12}$ m
- (2) $\frac{1}{10}$ m
- (3) $\frac{3}{20}$ m
- (4) $\frac{2}{3}$ m

13. Celine baked some muffins and packed them into identical boxes. If she packs 6 muffins into each box, she would have 4 muffins left. If she packs 9 muffins into each box, she would need 8 more muffins to fill the last box. How many muffins did Celine bake?

- (1) 12
- (2) 24
- (3) 28
- (4) 36

14. The table below shows the number of families with the respective number of children in their household.

Number of children per household	Number of families
0	4
1	5
2	7
3	5
4	2

What is the total number of families with at least 2 children?

- (1) 7
- (2) 14
- (3) 16
- (4) 19

15. What is the value of $15 + 17 + 19 + \dots + 41 + 43 + 45$?

- (1) 180
- (2) 360
- (3) 480
- (4) 780

End of Booklet A

TMY / KYS / AT / SL / AS

SINGAPORE CHINESE GIRLS' SCHOOL

FIRST SEMESTRAL ASSESSMENT 2018

PRIMARY 6

MATHEMATICS
PAPER 1

BOOKLET B

Name : _____ ()

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

4 May 2018

Paper 1	Mark attained	Max Mark
Booklet B		25

15 Questions
20 Marks

Total Time for Booklets A and B: 1 h

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 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)

16. Find the value of $10.1 - 4.79$

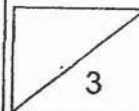
Ans: _____

17. Find the value of $4 \div \frac{6}{7}$.

Ans: _____

18. Express $\frac{3}{20}$ as a decimal.

Ans: _____



19. List the first two common multiples of 3 and 6.

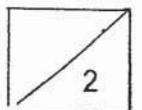
Do not write in
this column

Ans: _____ and _____

20. Andy weighed himself using the bathroom scale shown below.
His body mass is 108 kg when rounded off to the nearest kilogram. What is likely
to be the highest possible number that appeared on the bathroom scale?



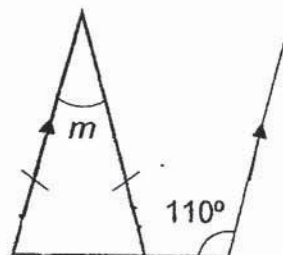
Ans: _____ kg



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 column

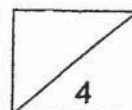
21. In the figure below, find the value of $\angle m$.



Ans: _____°

22. Find the value of $13y + 6 - 2y - 5$ when $y = 3$.

Ans: _____



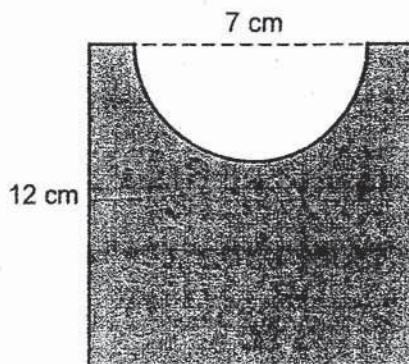
23. Sophia used some coloured beads to make some accessories. For every 5 red beads that she used, she would use 4 blue beads. If she used a total of 108 beads for the accessories, how many blue beads did she use altogether?

Do not write in
this column

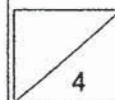
Ans: _____

24. In the figure, the shaded part is obtained by removing a semi-circle of diameter 7 cm from a square of side 12 cm.

Find the perimeter of the shaded part. (Take $\pi = \frac{22}{7}$)



Ans: _____ cm

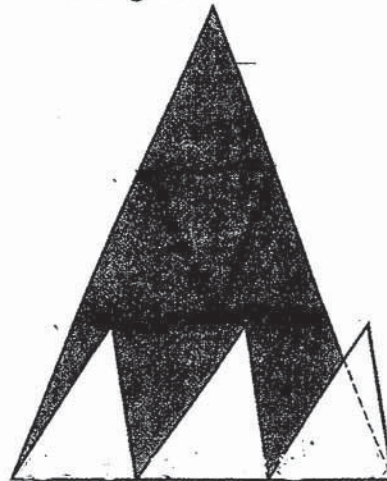


25. Jenny packed 0.5 kg of salt equally into 8 small packets. What is the mass of each packet of salt?

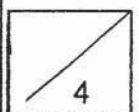
Do not write in this column

Ans: _____ g

26. The figure below is made up of a big triangle and three identical small triangles. The height of the big triangle is thrice the height of the small triangles. If the area of the big triangle is 27 cm^2 , what is the area of one small triangle?



Ans: _____ cm^2



27. The average of the 4 numbers shown below is 22.

Which number should be removed to obtain an average of 24 for the remaining numbers?

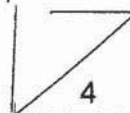
30 , 28 , 16 , 14

Do not write in
this column

Ans: _____

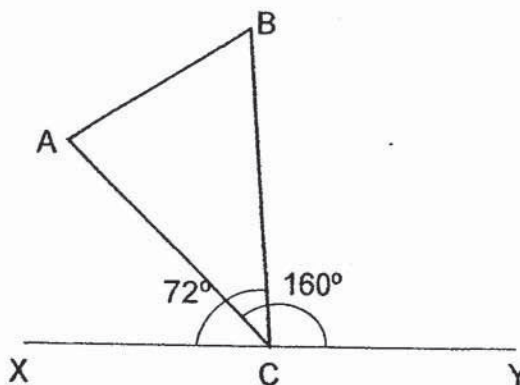
28. Linsey bought $(3 + 4k)$ peaches. She bought $2k$ fewer peaches than Marie. If Marie gave half of her peaches to her neighbour, how many peaches did her neighbour receive? Express your answer in terms of k .

Ans: _____

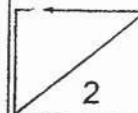


29. In the figure below, not drawn to scale, XCY is a straight line, $\angle BCX = 72^\circ$ and $\angle ACY = 160^\circ$.
Find $\angle ACB$.

Do not write in
this column

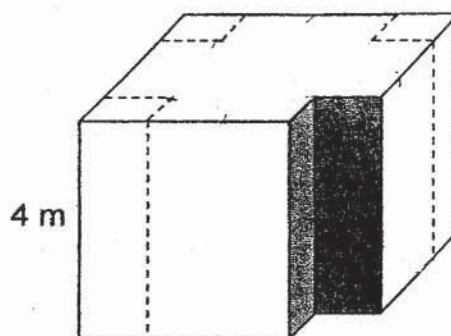


Ans; _____ °



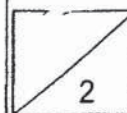
30. The solid below, not drawn to scale, shows a cube with $\frac{1}{16}$ of it cut off.

What is the volume of the remaining solid when all four identical corners are cut off as shown by the dotted lines?



Do not write in
this column

Ans: _____ m³



TMY / KYS / AT / SL / AS

SINGAPORE CHINESE GIRLS' SCHOOL

FIRST SEMESTRAL ASSESSMENT 2018

PRIMARY 6

MATHEMATICS

PAPER 2

Name : _____ ()

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

4 May 2018

Paper 2	Mark	Max Mark
		55

Parent's Signature

17 Questions
55 Marks

Total Time for Paper 2: 1 h 30 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 spaces provided. For questions which require units, give your answers in the units stated. **(10 marks)**

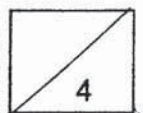
Do not write in this column

- 1 Gayle spent $\frac{3}{5}$ of her salary and Hamid spent $\frac{1}{4}$ of his salary. If they spent the same amount of money, what is the ratio of Gayle's salary to Hamid's salary?

Ans: _____

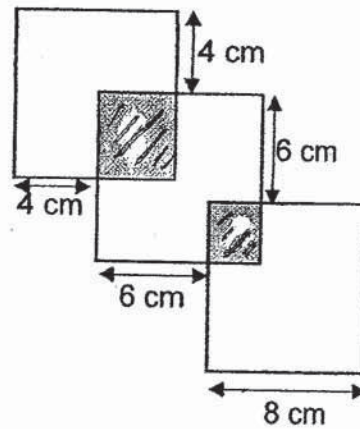
- 2 A group of children participated in a craft-making lesson. A total of 234 cards were distributed equally to the children, with each child receiving 3 cards. There were 6 children in each group. How many groups of children were there?

Ans: _____



3. James used 3 identical pieces of square papers of sides 8 cm each to form the figure below. The papers overlapped one another, as indicated by the shaded portions. Find the area of the figure below.

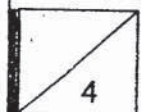
Do not write in this column



Ans: _____ cm^2

4. At a party, there were 40 boys and girls. The rest of the guests were adults. 24 guests were not boys and 20 guests were not girls. How many guests were at the party?

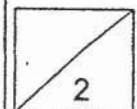
Ans: _____



5. Mandy paid \$16 for some key chains. She bought another 6 key chains which cost \$1.20 each. The average cost of all the key chains was \$1.45.
How many key chains did she buy altogether?

Do not write in
this column

Ans: _____



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. **(45 marks)**

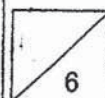
Do not write in
this column

6. After a discount of 15%, Mr Raju paid \$924.80 for a refrigerator. If he had paid \$848.64 for the refrigerator instead, what would the percentage discount be?

Ans: _____ [3]

7. At a game stall, each child needed 3 coupons to redeem a gift, while an adult needed 7 coupons. Given that $\frac{2}{3}$ of the people who redeemed gifts with their coupons were children and total of 1248 coupons were collected by the game stall, how many adults redeemed their gifts?

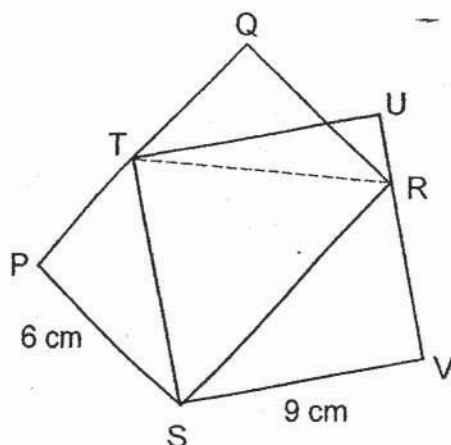
Ans: _____ [3]



8. The figure below, not drawn to scale, is made up of a square STUV and a rectangle PQRS.

Do not write in this column

- (a) Find the area of triangle RST.
(b) Find the length of PQ.

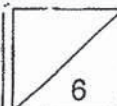


Ans: a) _____ [1]

b) _____ [2]

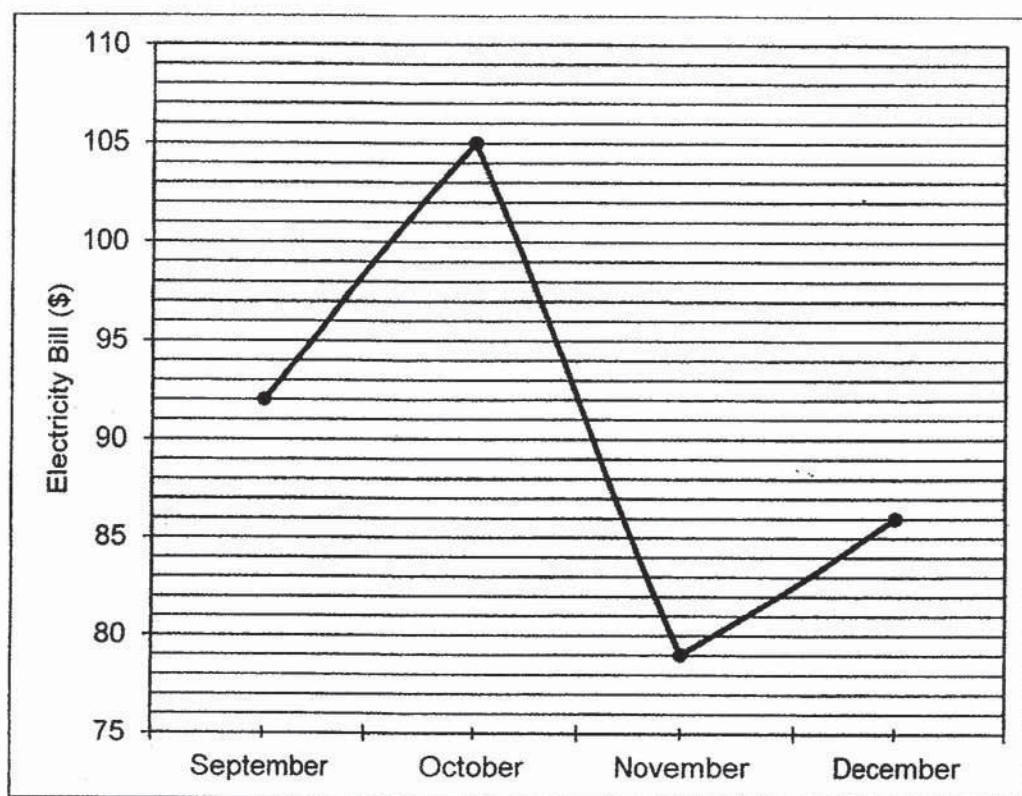
9. The ratio of Ben's age to Zoe's age is 4 : 1. In four years' time, the ratio of Ben's age to Zoe's age will be 14 : 5. How old will Ben be in four years' time?

Ans: _____ [3]



10. The graph below shows the amount of money spent on Mrs Teo's monthly electricity bill from September to December 2017.

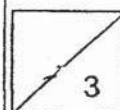
Do not write in this column



- (a) How much did Mrs Teo spend on her electricity bill over the four months?
- (b) Mrs Teo used a total of 1783 units of electricity over the four months. What is the electricity charges rate for the amount of electricity used? (Correct your answer to 2 decimal places).

Ans: a) _____ [1]

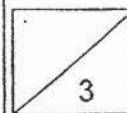
b) _____ [2]



11. Jasmine had $1\frac{2}{3}$ l of milk. She drank $\frac{7}{9}$ l of it and used $\frac{1}{3}$ of it to make some dessert. How much milk had she left? (Express your answer in its simplest form)

Do not write in
this column

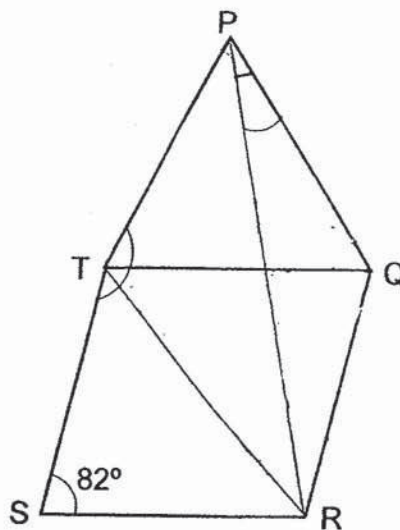
Ans: _____ [3]



12. The figure below, not drawn to scale, is made up of an equilateral triangle PQT and a rhombus QRST. $\angle RST = 82^\circ$.

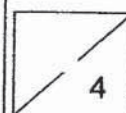
Do not write in this column

- (a) Find $\angle RPQ$
(b) Find $\angle STP$



Ans: a) _____ [2]

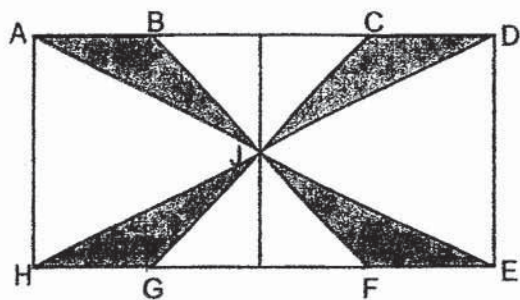
b) _____ [2]



13. The figure below is made up of four identical triangles within two identical squares.

B, C, F, G and J are mid-points of each side of the squares.

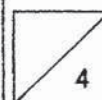
Do not write in
this column



- (a) What fraction of the figure is shaded?
- (b) If the total area of the shaded parts is 36 cm^2 , what is the area of a square?

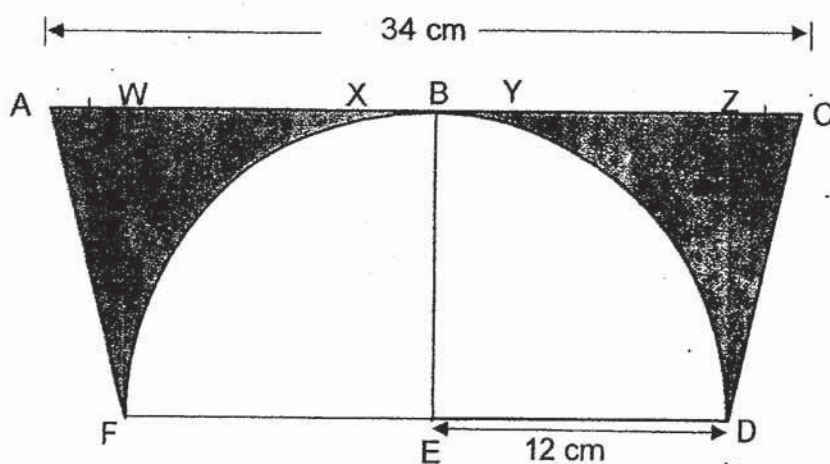
Ans: a) _____ [1]

b) _____ [3]

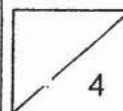


14. The figure below is made up of a semi-circle and a trapezium. $AW = ZC$. Find the area of the shaded parts. (Take $\pi = 3.14$)

Do not write in this column



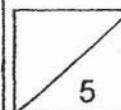
Ans: _____ [4]



15. Aishah and Su Ling folded paper cranes to raise funds for an event. $\frac{1}{3}$ of Aishah's paper cranes was 16 more than $\frac{1}{4}$ of Su Ling's paper cranes. After a few days, Aishah folded more paper cranes and her total increased by $\frac{1}{3}$. Su Ling had to throw away $\frac{1}{2}$ of hers as they were torn. At the end, Aishah had 82 paper cranes more than Su Ling. How many paper cranes were there at the end?

Do not write in this column

Ans: _____ [5]



16. Mrs Fong had some money to buy some pens and highlighters for a group of children. If she buys an equal number of pens and highlighters such that each child receives 1 pen and 1 highlighter, she would spend \$25.20 more on the highlighters.

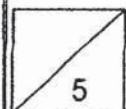
Do not write in
this column

Pens 4 for \$3.50 	Highlighters 3 for \$4.20 
--	---

- (a) How many children were there altogether?
- (b) After paying for the pens and highlighters, Mrs Fong had \$20.80 left.
How much did she have at first?

Ans: a) _____ [3]

b) _____ [2]

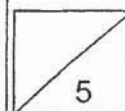


17. An egg seller had a total of 2400 chicken eggs and quail eggs. He accidentally broke some quail eggs and had to throw them away. He decided to add another 150 chicken eggs to his supply. As a result, the number of quail eggs decreased by 5% and the total number of eggs increased by 4.5%. How many chicken eggs did he have at first?

Do not write in
this column

Ans: _____ [5]

End of Paper



Answer Key & Worked Solutions

SCGS Paper

P6 Mathematics SA1 2018

Paper 1

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

Q16) 5.31

Q17) $4\frac{2}{3}$

Q18) 0.15

Q19) 6 and 12

Q20) 108.4kg

Q21) 40°

Q22) 34

Q23) 48 blue beads

Q24) 52 cm

Q25) $62\frac{1}{2}$ gQ26) 3 cm^2

Q27) 16

Q28) $(\frac{6k+3}{2})$ Q29) 52° Q30) 48 m^3

peaches

Paper 2

Q1. $\frac{3}{5}G = \frac{1}{4}H = \frac{3}{12}H$
Ratio $\rightarrow 5 : 12$

Q2. No. of cards in 1 group $\rightarrow 6 \times 3 = 18$
No. of groups $\rightarrow \frac{234}{18} \rightarrow 13$

Q3. Area of 3 sqs $\rightarrow 3 \times 8 \text{ cm} \times 8 \text{ cm} = 192 \text{ cm}^2$
Area of overlap $\rightarrow 4 \text{ cm} \times 4 \text{ cm} + 2 \text{ cm} \times 2 \text{ cm} = 20 \text{ cm}^2$
Area of figure $\rightarrow 192 \text{ cm}^2 - 20 \text{ cm}^2 \rightarrow 172 \text{ cm}^2$

Q4. Adults + girls $\rightarrow 20$
Adults + boys $\rightarrow 24$
 $2 \times \text{adults} + \text{girls} + \text{boys} \rightarrow 20 + 24 = 44$
 $2 \times \text{adults} \rightarrow 44 - 40 = 4$
Adults $\rightarrow \frac{4}{2} = 2$
Total guests $\rightarrow 40 + 2 = 42$

Q5. Extra $\rightarrow 1.20 \times 6 = 7.20$
Total $\rightarrow 7.20 + 16 = 23.20$
No. of key chains $\rightarrow 23.20 \div 1.45 \rightarrow 16$ key chains

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

- Ans: 22%

- Ans: 96

8. a)

$$\text{Area of triangle RST} = \frac{1}{2} \times 9 \times 9 = 40.5 \text{ cm}^2$$

b)

Let length PQ = u

$$\frac{1}{2} \times 6 \times u = 40.5$$

$$u = 40.5 \div 3 = 13.5 \text{ cm}$$

Ans: (a) 40.5 cm^2
(b) 13.5 cm

9. Ratio of Ben's age to Zoe's age $\rightarrow 4 : 1 \rightarrow 24 : 6$ Ratio of Ben's age to Zoe's age in 4 years time $\rightarrow 14 : 5 \rightarrow 28 : 10$

Ben's age in 4 years time = 28 years old

Ans: 28 years old

10. a)

Total electricity bill in 4 months = $92 + 105 + 79 + 86 = \$362$

b)

Electricity charge rate = $362 \div 1783 = \$0.20$ per unit

Ans: (a) \$362
(b) \$0.20 per unit

11. Desert volume = $\frac{1}{3} \times \frac{5}{3} = \frac{5}{9} \ell$ Amount of milk left = $1\frac{2}{3} - \frac{7}{9} - \frac{5}{9} = \frac{15}{9} - \frac{7}{9} - \frac{5}{9} = \frac{3}{9} \ell = \frac{1}{3} \ell$

Ans: $\frac{1}{3} \ell$

12. a)

$$\angle TQR = 82^\circ$$

$$\angle PQR = 60 + 82 = 142^\circ$$

$$\angle RPQ = (180 - 142) \div 2 = 19^\circ$$

(PQR is an isosceles triangle)

b)

$$\angle STQ = 180 - 82 = 98^\circ$$

$$\angle STP = 98 + 60 = 158^\circ$$

Ans: (a) 19°
(b) 158°

13. a)

Let u = length of square

$$\text{Area of ABC} = \frac{1}{2} \times \frac{1}{2} u \times \frac{1}{2} u = \frac{1}{8} u \times u$$

$$\text{Area of 4 shaded triangles} = 4 \times \frac{1}{8} u \times u = \frac{1}{2} u \times u$$

$$\text{Area of 2 squares} = 2 \times u \times u = 2 u \times u$$

$$\text{Fraction of shaded figure} = \frac{\frac{1}{2}}{2} = \frac{1}{4}$$

b)

$$\text{Area of figure} = \text{area of 2 squares} = 36 \times 4 = 144 \text{ cm}^2$$

$$\text{Area of 1 square} = 144 \div 2 = 72 \text{ cm}^2$$

Ans: (a) $\frac{1}{4}$

(b) 72 cm^2

14. Area of semi-circle = $\frac{1}{2} \times \pi \times 12 \times 12 = 72\pi \text{ cm}^2 = 72 \times 3.14 = 226.08 \text{ cm}^2$

Area of trapezium = $12 \times (34 + 24) \div 2 = 348 \text{ cm}^2$

Shaded area = $348 - 226.08 = 121.92 \text{ cm}^2$

Ans: 121.92 cm^2

15. At last,

Difference between $\frac{4}{3}$ of Aishah and all of Su Ling's paper cranes = $16 \times 4 = 64$

Difference between $\frac{4}{3}$ of Aishah and half of Su Ling's paper cranes = 82

Half of Su Ling's paper cranes = $82 - 64 = 18$

Total paper cranes at last = $18 + 18 + 82 = 118$

Ans: 118 paper cranes

16. a)

Difference in price between 12 pens and 12 highlighters = $4 \times 4.20 - 3 \times 3.50$
= \$6.30

Number of sets of 12 pens and 12 highlighters = $25.20 \div 6.30 = 4$

Number of children = $4 \times 12 = 48$

b)

Price of set of 12 pens and 12 highlighters = $3 \times 3.50 + 4 \times 4.20 = \27.3

4 sets of 12 pens and 12 highlighters = $27.3 \times 4 = \$109.20$

Amount she had at first = $109.20 + 20.80 = \$130$

Ans: (a) 48

(b) \$130

17. Net increase in total number of eggs = $4.5 \div 100 \times 2400 = 108$

Number of quail eggs thrown away = $150 - 108 = 42$

5% of quail eggs = 42

100% of quail eggs = $42 \times 20 = 840$

Number of chicken eggs at first = $2400 - 840 = 1560$

Ans: 1560 chicken eggs
