RAFFLES GIRLS' PRIMARY SCHOOL
PRELIMINARY EXAMINATION
MATHEMATICS (PAPER 1)
PRIMARY 6

Name: _____ ( )

Form Class: P6_____ Math Teacher : _____

Date: 24 Aug 2018 Duration: 1 hour

Your Paper 1 Score (Out of 45 marks)	
Your Paper 2 Score (Out of 55 marks)	
Your Total Score (Out of 100 marks)	
Parent's Signature	

INSTRUCTIONS TO CANDIDATES

1. Do not turn over this page until you are told to do so.
2. Follow all instructions carefully.
3. Answer **ALL** questions and show all working clearly.
4. **NO** calculator is allowed for this paper.

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 your answer (1, 2, 3 or 4) on the OAS provided.
All diagrams are not drawn to scale.

1. Round 259 136 to the nearest 1000.

   (1) 259 000
   (2) 259 100
   (3) 260 000
   (4) 260 100

2. In 1347.025, which digit is in the hundredths place?

   (1) 0
   (2) 2
   (3) 3
   (4) 4

3. Jane left her home at 23 48. She took 20 minutes to reach the airport. What time did she reach the airport?

   (1) 12.08 p.m.
   (2) 12.18 p.m.
   (3) 12.08 a.m.
   (4) 12.18 a.m.

4. Arrange the following fractions from the biggest to the smallest.

$$\frac{2}{5} \quad , \quad \frac{8}{9} \quad , \quad \frac{1}{7}$$

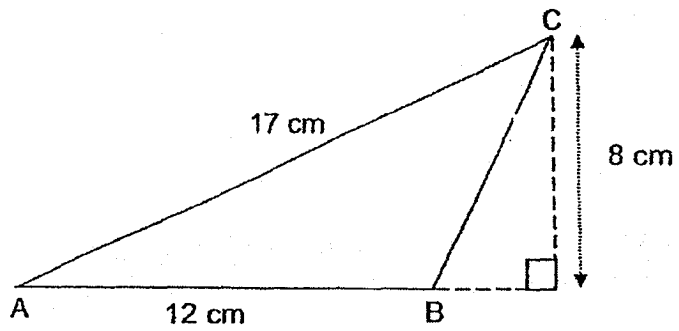
(1) $\frac{2}{5}$, $\frac{8}{9}$, $\frac{1}{7}$

(2) $\frac{1}{7}$, $\frac{8}{9}$, $\frac{2}{5}$

(3) $\frac{8}{9}$, $\frac{1}{7}$, $\frac{2}{5}$

(4) $\frac{8}{9}$, $\frac{2}{5}$, $\frac{1}{7}$

5. ABC is a triangle. AC = 17 cm and AB = 12 cm.
Find the area of triangle ABC.



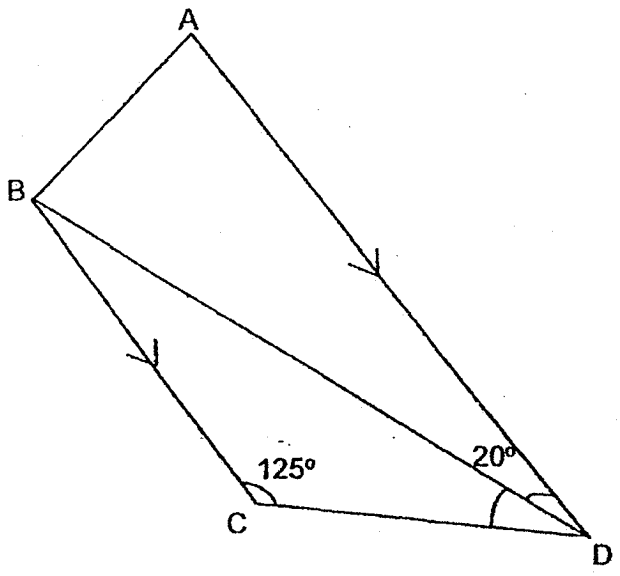
(1) 48 cm^2

(2) 68 cm^2

(3) 96 cm^2

(4) 102 cm^2

6. In the figure, ABCD is a trapezium where AD is parallel to BC. Find $\angle BDC$.



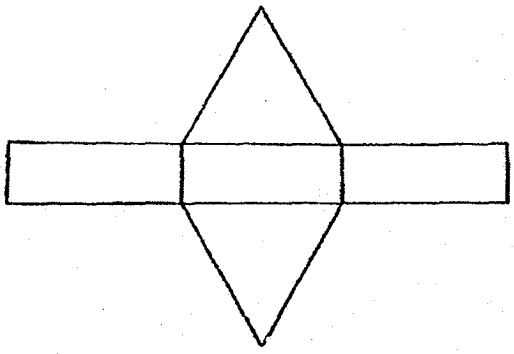
(1) 20°

(2) 35°

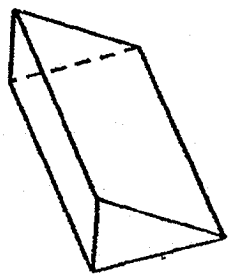
(3) 55°

(4) 160°

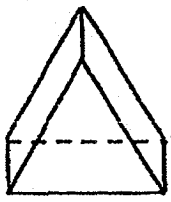
7. The diagram shows the net of a solid Which of the following is the correct solid?



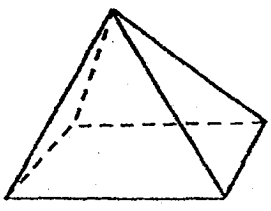
(1)



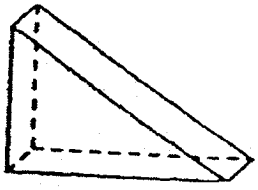
(2)



(3)



(4)



8. Given that $p : q = 5 : 2$ and $q : r = 3 : 4$, express r as a fraction of p.

(1) $\frac{3}{5}$

(2) $\frac{8}{15}$

(3) $\frac{4}{5}$

(4) $\frac{5}{4}$

9. _____ ÷ 17 = 86. What is the missing number in the blank?

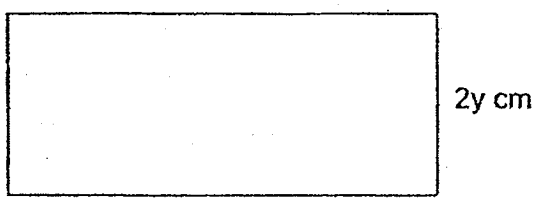
(1) 688

(2) 1422

(3) 1462

(4) 1862

10. The length and breadth of a rectangle are (4y + 5) cm and 2y cm respectively. What is the perimeter of the rectangle?



(1) 11y cm

(2) 22y cm

(3) (6y + 5) cm

(4) (12y + 10) cm

11. A wallet and a pen cost $99. The cost of the pen is 20% less than the cost of the wallet. How much does the pen cost?

(1) $44

(2) $45

(3) $54

(4) $55

12. Raffles Kitchen Set Meal A

Item	Cost
Chilli crab	$54.65
Tofu	$9.90
Fried vegetables	$12.90

Mr Tan ordered the above dishes and paid using 2 fifty-dollar notes. How much change did he receive?

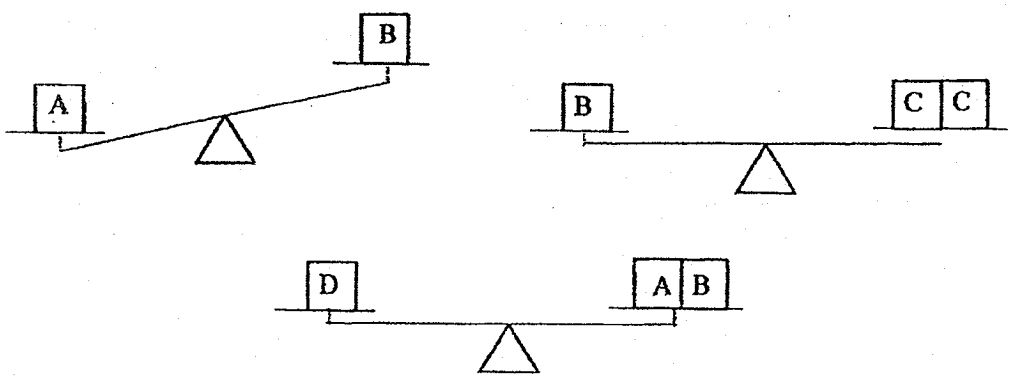
(1) $22.55

(2) $23.45

(3) $23.55

(4) $77.45

13. Which is the heaviest block?



(1) A

(2) B

(3) C

(4) D

14. John paid $900 for a laptop at a discount of 10% at an electronics shop. He signed up as a member of the shop and enjoyed an additional 10% discount on top of the discounted price. What was the total discount John received for buying the laptop?

(1) $190

(2) $180

(3) $100

(4) $90

15. Machine A and B can print a total of 348 pages in 4 minutes while Machine B and C can print a total of 276 pages in 3 minutes. Each machine prints an equal number of pages every minute. At this rate, how many more pages can Machine C print than Machine A in 5 minutes?

(1) 60

(2) 47

(3) 35

(4) 25

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. All diagrams are not drawn to scale.

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16. Find the value of 5 hundreds, 7 tenths and 9 thousandths.

Ans: _____

17. What is the correct number in the box?

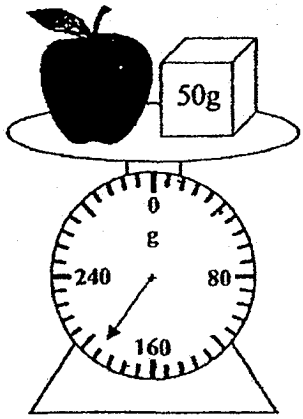
$$2\frac{7}{12} = \frac{1}{12} + \frac{1}{12} + \frac{1}{12} + \frac{1}{12} + \frac{\square}{4}$$

Ans: _____

18. Ali and 8 other classmates gave Ella a birthday treat. The total amount was $108.45 and they decided to share the cost equally. How much did each of them pay?

Ans: $_____

19. Find the mass of the apple.



Ans: _____ g

20. Natasha had a roll of ribbon of length that is k cm long. She cut 17 equal pieces from it and had 8 cm of ribbon left. What was the length of each piece of ribbon? Express your answer in terms of k.

Ans: _____ cm

Questions **21** to **30** carry 2 marks each. Show your working clearly in the space provided for each question and write your answers in the space provided. For questions which require units, give your answers in the units stated. All diagrams are not drawn to scale.

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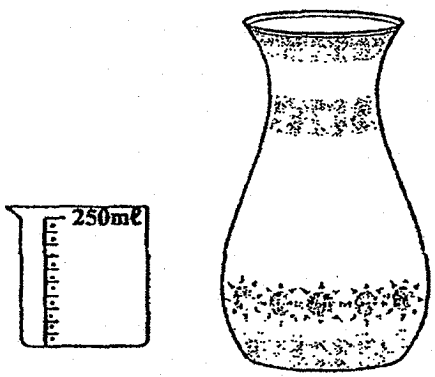
21. Chef Tan used $1\frac{3}{10}$ kg of flour to bake some muffins. He used $\frac{5}{8}$ kg of flour to bake a cake. How much flour did he use altogether? Express your answer as a mixed number.

Ans: _____kg

22.



The water from the beaker can fill up $\frac{1}{8}$ of the vase. Find the volume of the vase.

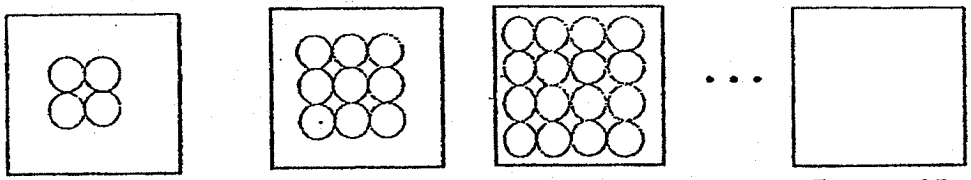
Ans: _____ $m\ell$

23. The table shows the number of books the pupils borrowed from a school library in four days. The average number of books borrowed each day from Monday to Thursday was 50. What was the number of books borrowed on Thursday?

	Monday	Tuesday	Wednesday	Thursday
Number of books borrowed	38	54	17	?

Ans: _____

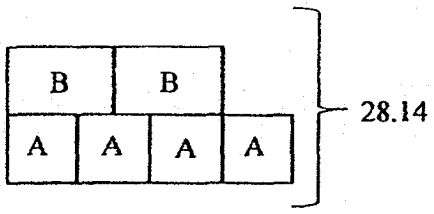
24. How many circles are there in Pattern 25?



Pattern 1 Pattern 2 Pattern 3 ... Pattern 25

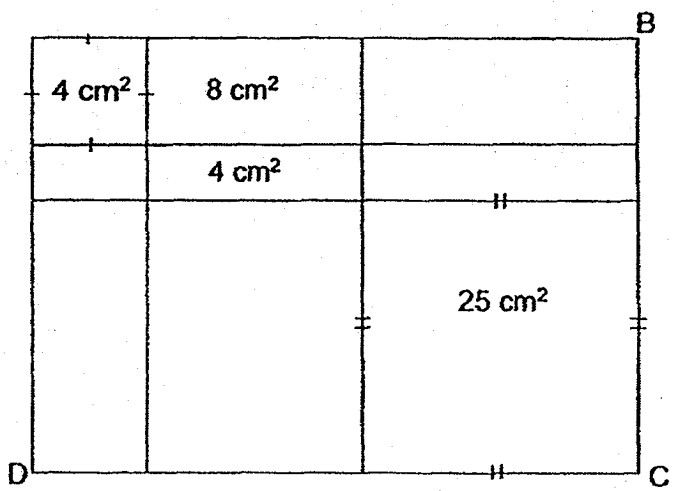
Ans: _____

25. Ravi drew a model to help him solve a word problem.
What was the value of A?



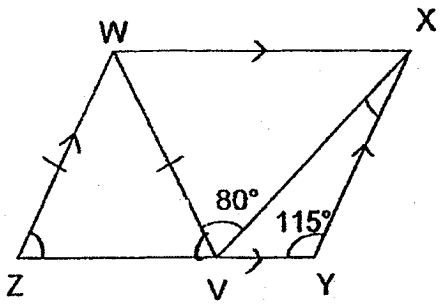
Ans: _____

26. In the figure, rectangle ABCD is made up of 9 smaller parts, consisting of squares and rectangles. The area of some of the parts are shown. Find the perimeter of rectangle ABCD.



Ans: _____ cm

27. The diagram shows a parallelogram WXYZ. WVZ is an isosceles triangle. Find $\angle VXY$.



Ans: _____ °

28. Kenneth and Marshall started cycling from the same starting point along a track. Both started cycling at the same time and they did not change their speeds throughout. Kenneth reached the end of the track in 2 hours. Marshall covered only $\frac{4}{5}$ of the track in that time. Given that Kenneth's average speed was 2 km/h faster than Marshall, find the length of the track.

Ans: _____ km

29. The pie chart shows how Anita spent her time in a 24-hour day.

Anita spent 4 hours of her day doing housework. She spent half of the day sleeping and playing golf. If the time spent on cooking and baking was the same, how much time did she spend on cooking?

Ans: _____h

30. Kendrick has 34 more coins than Su Mei at first. Su Mei gives 12 of her coins to Kendrick. In the end, Kendrick has thrice as many coins as Su Mei.

Based on the information above, put a tick in the correct box.

	True	False	Impossible to tell
a) Su Mei has 40 coins at first.			
b) Kendrick has more money than Su Mei at first.			

End of Paper

☺ Please check your work carefully ☺

RAFFLES GIRLS' PRIMARY SCHOOL
PRELIMINARY EXAMINATION
MATHEMATICS (PAPER 2)
PRIMARY 6

Name: _____ ( )

Form class: P6 _____ Math Teacher :_____

Date: 24 Aug 2018 Duration: 1 h 30 min

INSTRUCTIONS TO CANDIDATES

1. Do not turn over this page until you are told to do so.
2. Follow all instructions carefully.
3. Answer **ALL** questions and show all working clearly.
4. The use of calculator is allowed for this paper.

Questions **1** to **5** carry 2 marks each. Show your working clearly in the space provided for each question and write your answers in the spaces provided.
All diagrams are not drawn to scale.
For questions which require units, give your answers in the units stated. (10 marks)

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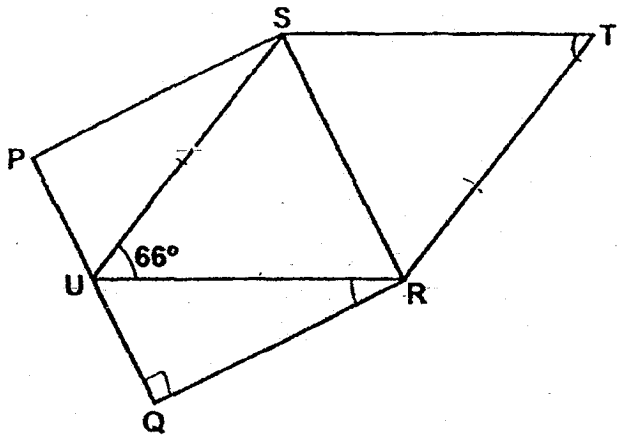
1. The figure is made up of a square, PQRS, and a rhombus, RTSU.
Find ∠QRU.



Ans : _____ ° [2]

2. The ratio of the number of pencils to the number of erasers in a box was 3 : 4 at first. After adding 12 pencils and removing 15 erasers from the box, the ratio of the number of pencils to the number of erasers became 1 : 1.
How many erasers were there in the box at the end?

Ans : _____ [2]

3. Figure A is a square with side 5 cm. When the side of the square is increased by 1 cm, what is the percentage increase in the area of the new square?

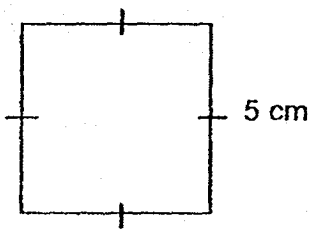


Figure A

Ans : _____ % [2]

4. A muffin costs $ k and a sandwich costs $0.40 more than a muffin. Mavis has enough money to buy exactly 2 sandwiches and 1 muffin. If Mavis has $5.30, find the cost of 1 sandwich.

Ans : $_____ [2]

5. Sharon had 5 kg of sugar She packed the sugar into packets of $\frac{2}{3}$ kg. How much sugar did she have left?

Ans: _____ kg [2]

For questions **6** to **17**, show your working clearly in the space provided for each question and write your answers in the spaces provided. The number of marks available is shown in the brackets [ ] at the end of each question or part-question. All diagrams are not drawn to scale. (45 marks)

6.

Special Offer !

1 cheese tart $1.40

Buy 3 and get 1 free

(a) Tony wants to get 4 cheese tarts. How much does he need to pay?

(b) Sonia has $83. What is the most number of cheese tarts that she can get altogether?

Ans: (a) _____ [1]

(b) _____ [2]

7. Jason bought some pencils for his classmates. He paid $7.20 for the pencils. If he gave everyone 5 pencils each, he would have 3 pencils left. If he gave everyone 6 pencils each, he would need 6 more pencils.

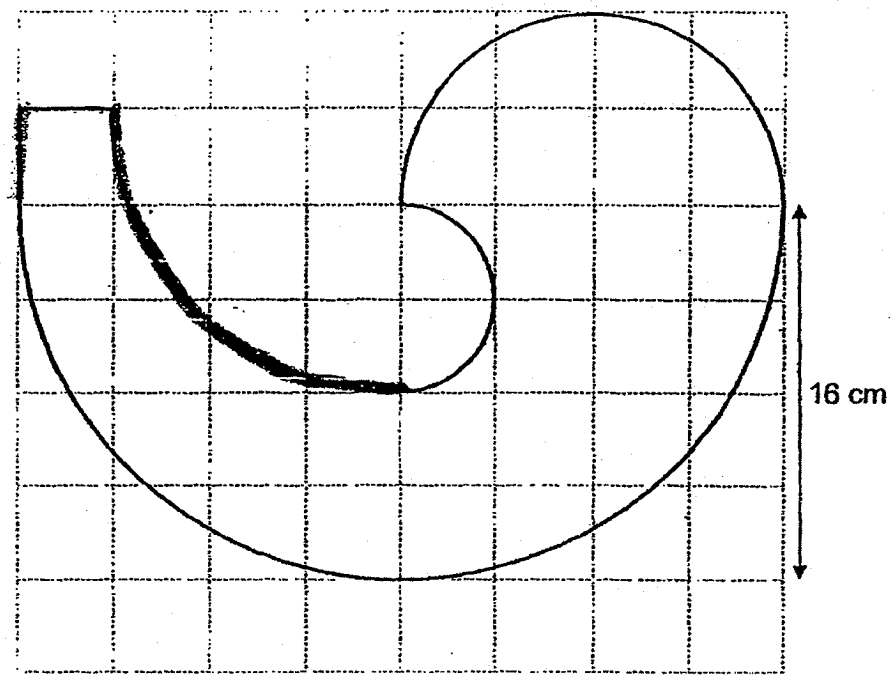
(a) How many classmates did Jason have?

(b) What was the cost of 1 pencil?

Ans: (a) _____ [1]

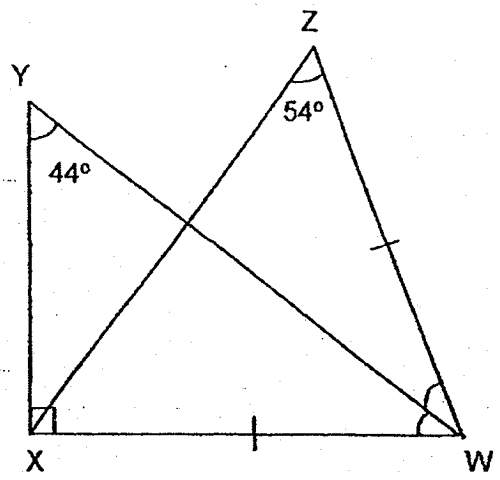
(b) _____ [2]

8. Grace forms the shape below using a piece of wire. The shape is made up of 3 semicircles, 1 quadrant and 2 straight lines. What is the length of wire used to form the shape?
(Take $\pi = 3.14$)



Ans: _____[4]

9. In the figure, WXZ is an isosceles triangle where WX = WZ, and WX is perpendicular to XY.
Find ∠YWZ.

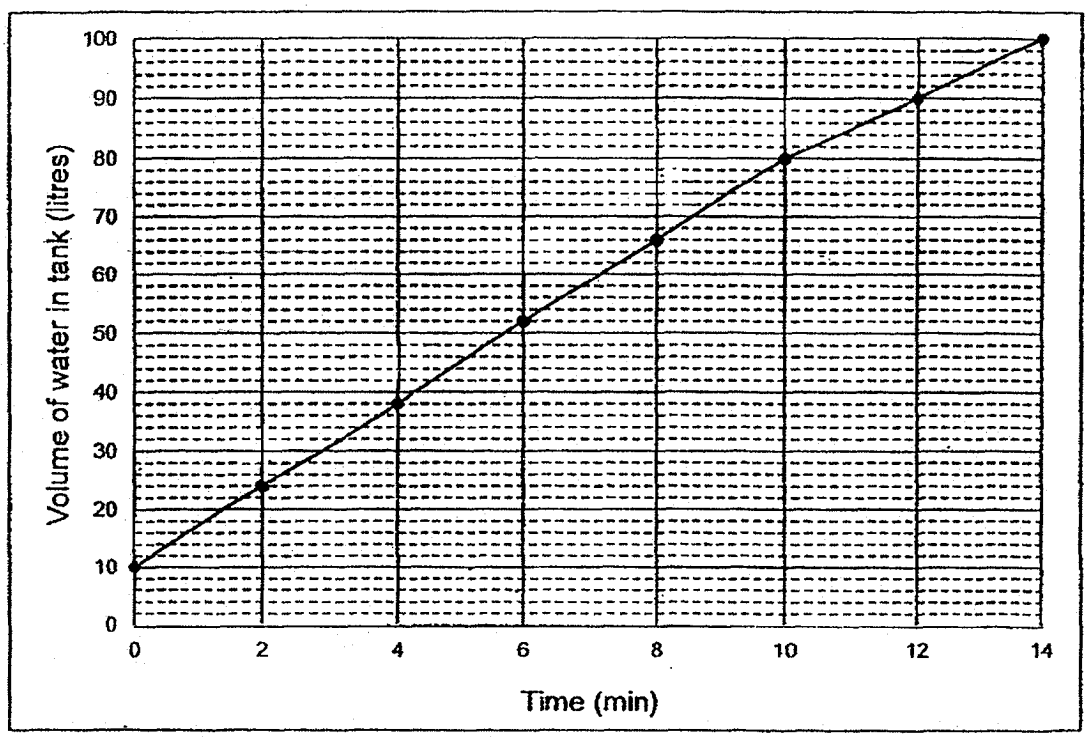


Ans: _____ [3]

10. At a community centre, there were three cooking classes, A, B and C. There were 6 more men in Class B than Class C and 6 fewer men in Class B than Class A. The ratio of the number of men to the number of women in Class A, B and C were 1 : 2, 1 : 3 and 1 : 5 respectively. All the three classes had the same number of participants. How many men were there altogether?

Ans: _____ [3]

11. At first, the rectangular tank was partially filled with water. Mandy turned on two taps, A and B. After 10 minutes, the volume of water was $\frac{4}{5}$ of the volume of the tank. She then turned off Tap A and left Tap B flowing until the tank was completely filled. The graph shows the amount of water in the tank.



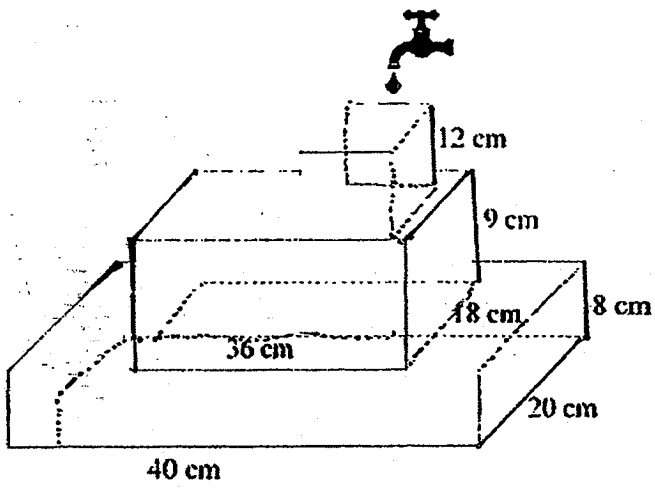
(a) What was the volume of the rectangular tank?

(b) How many litres of water flowed from Tap A every minute?

Ans: (a) _____ [1]

(b) _____ [3]

12. The empty container is made up of 2 cuboids and a cube. The top of the container is a cube. Water flows into the container from the top to the base at 1.619 ℓ/min. What is the height of the water level from the base of the container after 8 minutes?



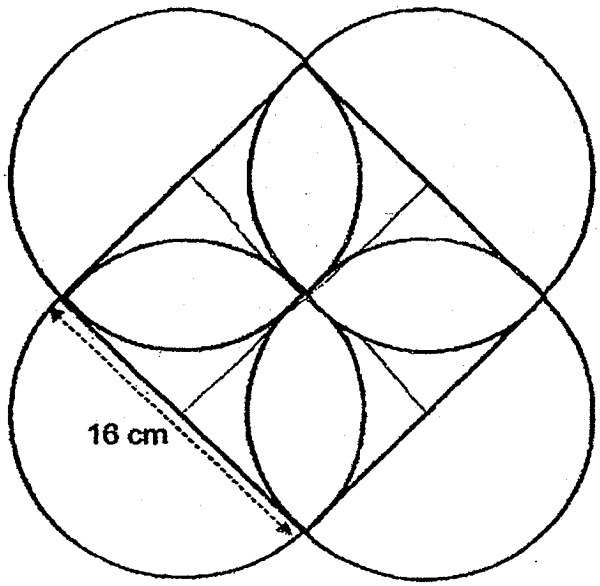
Ans: _____ .[4]

13. The figure is made up of four circles and one square.

(a) Find the perimeter of the unshaded part.

(b) Find the area of the shaded figure.

(Take π= 3.14)



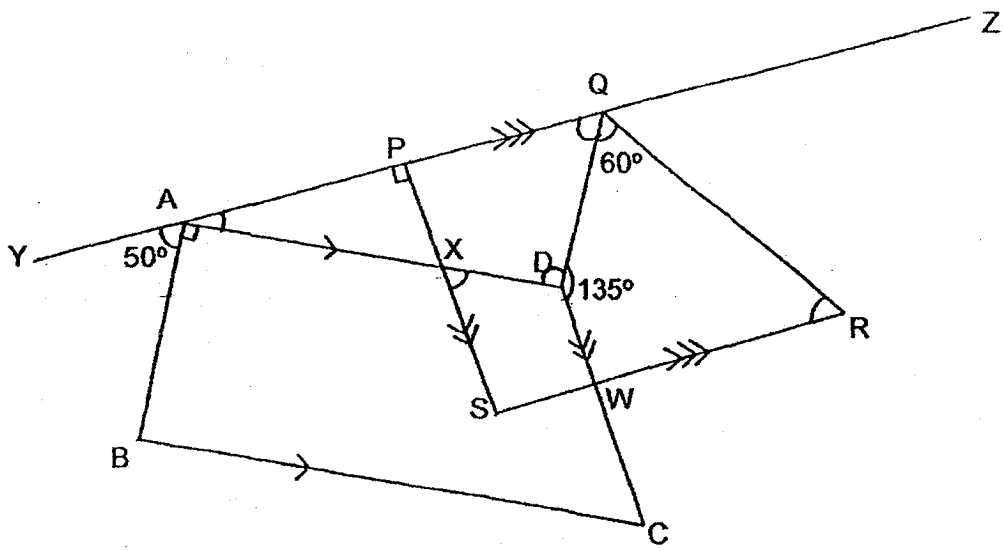
Ans: (a) _____ [1]

(b) _____ [3]

14. In the figure, YZ is a straight line while ABCD and PQRS are overlapping trapeziums. Given that $\angle YAB = 50°$, $\angle QDW = 135°$ and $\angle DQR = 60°$

a) find $\angle DXS$.

b) find $\angle QRW$.



Ans: (a)_____ [1]

(b)_____ [3]

15. At a travel fair, there were 125 more women than men. When 40% of the women and $\frac{3}{4}$ of the men left the fair, there were 243 more women than men remaining at the fair. How many men were there at the travel fair at first?

Ans: _____ [5]

16. Tricia collects stamps as her hobby. $\frac{1}{7}$ of the stamps are from Australia, $\frac{1}{4}$ of the stamps are from China, and the rest are from Singapore and Malaysia. She has an equal number of stamps from Singapore and Malaysia.

(a) If Tricia has 799 Malaysian stamps, how many stamps are from Australia?

(b) Aunty May gave Tricia some Australian stamps. As a result, $\frac{7}{19}$ of Tricia's stamps are from Australia. How many stamps did Aunty May give Tricia?

Ans: (a)_____[3]

(b) _____[2]

17. On Monday, the average number of books donated by each pupil during a donation drive was 23. On Tuesday, 30 pupils donated an average of 14 books each. In the end, the average number of books donated by each pupil on both days was 20. How many books were donated on Monday?

Ans: _____ [3]

End of Paper
Please check your work carefully ☺

ANSWER KEY

YEAR	:	2018
LEVEL	:	PRIMARY 6
SCHOOL :	:	RAFFLES GIRLS' PRIMARY
SUBJECT :	:	MATHEMATICS
TERM	:	PRELIMINARY EXAMINATION

Paper 1

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

Q16 500.709

Q17 9

Q18 $12.05

Q19 142 g

Q20 $\left(\frac{k-B}{17}\right)$ cm

Q21 $1\frac{37}{40}$ kg

Q22 400 mℓ

Q23 91 books

Q24 676

Q25 4.02

Q26 38 cm

Q27 30°

Q28 20 km

Q29 1 h

Q30 (a) False

(b) Impossible to tell

Paper 2

Q1 $(180 - 66) \div 2 = 57$
$90 - 57 \Rightarrow \underline{33°}$

Q2 $12 + 15 = 27$
$u = 27$
$4u = 108$
$108 - 15 \Rightarrow \underline{93 \text{ erasers}}$

Q3 $5 + 1 = 6$
$6 \times 6 = 36$
$36 - 25 = 11$
$5 \times 5 = 25$

$\frac{11}{25} \times 100 \Rightarrow \underline{44\ \%}$

Q4 $k + 0.4 + k + 0.4 + k = 3k + 0.8$
$(5.30 - 0.80) \div 3 = 1.5$
$1.5 + 0.4 \Rightarrow \underline{\$1.90}$

Q5 $5 \div \frac{2}{3} = \frac{5}{1} \times \frac{3}{2}$

$= \frac{15}{2}$

$= 7\frac{1}{2}$

$7 \times \frac{2}{3} = 4\frac{2}{3}$

$5 - 4\frac{2}{3} \Rightarrow \frac{1}{3}$ kg

Q6 (a) $1.40 \times 3 \Rightarrow \underline{\$4.20}$

(b) $83 \div 4.20 = 19$ r 3.20
$19 \times 4 = 76$
$3.20 \div 1.40 \approx 2$
$76 + 2 \Rightarrow \underline{78 \text{ cheese tarts}}$

Q7 (a) $3 + 6 \Rightarrow \underline{9 \text{ classmates}}$

(b) $9 \times 5 + 3 = 48$
$7.20 \div 48 = 0.15$
$\$0.15 \Rightarrow \underline{15¢}$

Q8 $16 \div 4 = 4$
$4 \times 2 = 8$
$8 \times 4 = 32$

$\frac{1}{2} \times 32 \times 3.14 = 50.24$

$6 \times 4 = 24$

$\frac{1}{4} \times 24 \times 3.14 = 18.84$

$2 \times 4 = 8$

$\frac{1}{2} \times 8 \times 3.14 = 12.56$

$4 \times 4 = 16$

$\frac{1}{2} \times 16 \times 3.14 = 25.12$

$25.12 + 8 + 50.24 + 18.84 + 12.56 \Rightarrow \underline{114.76 \text{ cm}}$

Q9 $180° - 44° - 90° = 46°$
$180° - 54° - 54° = 72°$
$72° - 46° \Rightarrow \underline{26°}$

Q10

	M	:	W	:	Total
A	1	:	2	:	3
	= 4	:	8	:	12
B	1	:	3	:	4
	= 3	:	9	:	12
C	1	:	5	:	6
	= 2	:	10	:	12

$4 - 3 = 1$
$1u = 6$
$4u + 3u + 2u \Rightarrow$ <u>54 men</u>

Q11 (a) $\frac{4}{5} \rightarrow 80$

$80 \div 4 \times 5 = 100$
$100\ \ell \Rightarrow$ <u>100 000 cm^3</u>

(b) $2\ min \rightarrow 10\ \ell$
$10\ min \rightarrow 10\ \ell$
$24 - 10 = 14$
$14 - 10 = 4$
$4 \div 2 \Rightarrow$ <u>2 ℓ / min</u>

Q12 $1.619 \times 8 = 12.952$
$12.952\ \ell = 12952\ cm^3$
$40 \times 20 \times 8 = 6400$
$12952 - 6400 = 6552$
$36 \times 18 \times 9 = 5832$
$6552 - 5832 = 720$
$720 \div (12 \times 12) = 5$
$5 + 9 + 8 \Rightarrow$ <u>22 cm</u>

Q13 (a) $\frac{1}{4} \times 16 \times 3.14 = 12.56$

$12.56 \times 8 \Rightarrow \underline{100.48 \text{ cm}}$

(b) $16 \div 2 = 8$
$2 \times 8 \times 8 \times 3.14 = 401.92$
$8 \times 16 = 128$

$\frac{1}{2} \times 8 \times 8 \times 3.14$

$128 - 100.48 = 27.52$
$27.52 \times 4 = 110.08$
$110.08 + 401.92 \Rightarrow \underline{512 \text{ cm}^2}$

Q14 (a) $180° - 50° - 90° = 40°$
$180° - 40° - 90° \Rightarrow \underline{50°}$

(b) $180° - 50° = 130°$
$360° - 130° - 135° = 95°$
$180° - 95° - 40° = 45°$
$180° - 45° - 60° \Rightarrow \underline{75°}$

Q15

	Men	Women
At 1st	20u	20u + 125
Went	15u	8u + 50
End	5u	12u + 75

$12u + 75 = 5u + 243$
$7u = 168$
$u = 24$
$20u \Rightarrow \underline{480 \text{ men}}$

Q16 (a) $1 - \frac{1}{7} - \frac{1}{4} = \frac{17}{28}$

$799 \times 2 = 1598$

$1598 \div 17 \times 28 = 2632$

$\frac{1}{7} \times 2632 \Rightarrow$ <u>376 stamps</u>

(b) $2632 - 376 = 2256$

$1 - \frac{7}{19} = \frac{12}{19}$

$2256 \div 12 \times 7 = 1316$

$1316 - 3376 \Rightarrow$ <u>940 stamps</u>

Q17 $30 \times 14 = 420$
$X =$ no. of pupils who donated books on Monday
$23 \times X = 23X$

$\frac{420 + 23X}{30 + X} = 20$

$20 \times (30 \times X) = 420 + 23X$
$600 + 20X = 420 + 23X$
$3X = 180$
$X = 60$
$60 \times 23 \Rightarrow$ <u>1380 books</u>