

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

Name:	
Form Class: P6	Math Teacher:
Date: 24 Aug 2017	Duration: 50 min
Your Score	
Paper 1 (Out of 40 marks)	
Paper 2 (Out of 60 marks)	
Overall (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.

SECTION A (20 marks)

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.

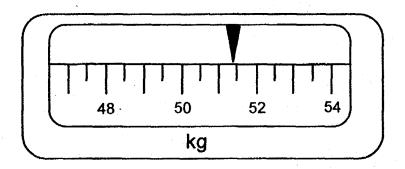
- 1. The value of the digit 4 in 364 798 is _____
 - (1) 40 ones
 - (2) 40 tens
 - (3) 40 hundreds
 - (4) 40 thousands
- 2. Round off 72 590 to the nearest hundred.
 - (1) 72 000
 - (2) 72 500
 - (3) 72 600
 - (4) 73 000
- 3. Which of the following fractions is equal to $4\frac{5}{8}$?
 - (1) $\frac{28}{8}$
 - (2) $\frac{32}{8}$
 - (3) $\frac{37}{8}$
 - (4) $\frac{45}{8}$

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

$$\frac{5}{3}$$
 , $1\frac{5}{6}$, $\frac{11}{9}$

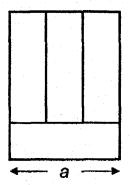
- (1) $\frac{5}{3}$, $\frac{11}{9}$, $1\frac{5}{6}$
- (2) $\frac{11}{9}$, $\frac{5}{3}$, $1\frac{5}{6}$
- (3) $\frac{11}{9}$, $1\frac{5}{6}$, $\frac{5}{3}$
- (4) $1\frac{5}{6}$, $\frac{5}{3}$, $\frac{11}{9}$
- 5. 6 hundreds, 2 tenths and 4 thousandths is _____
 - (1) 620.004
 - (2) 600.240
 - (3) 600.204
 - (4) 600.024
- 6. Which of the following fractions is nearest to $\frac{1}{7}$?
 - (1) $\frac{1}{4}$
 - (2) $\frac{1}{10}$
 - (3) $\frac{3}{20}$
 - (4) $\frac{7}{50}$

7. Which of the following is closest to the reading shown on the weighing scale below?

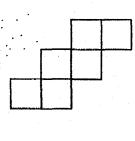


- (1) 50.75 kg
- (2) 51.25 kg
- (3) 51.45 kg
- (4) 51.75 kg
- 8. Which of the following is the same as 7090 m?
 - (1) 7 km 9 m
 - (2) 7 km 90 m
 - (3) 70 km 9 m
 - (4) 70 km 90 m

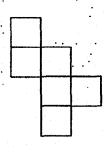
9. The figure below is made up of 4 identical rectangles. The perimeter of the figure is 28 cm. What is the length of a?



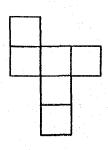
- (1) 6 cm
- (2) 2 cm
- (3) 7 cm
- (4) 8 cm
- 10. Which of the following is not a net of a cube?



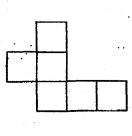
(1)



(2)

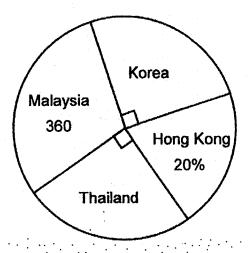


(3)



(4)

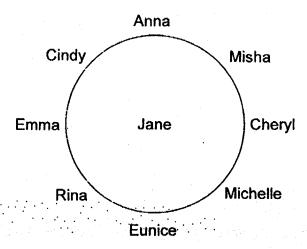
11. The pie chart represents the countries visited by a group of children during their school holiday. 20% of the children visited Hong Kong and 360 children visited Malaysia.



How many children visited Thailand?

- (1) 190
- (2) 200
- (3) 300
- (4) 450

12. Jane stood at the centre of a circle. Her 8 friends stood around her and spaced themselves out equally as shown below. Jane made a 90° anticlockwise turn followed by a 135° clockwise turn. In the end, Jane was facing Emma. Who was Jane facing at first?



- (1) Rina
 - (2) Cindy
 - (3) Anna
 - (4) Misha
- 13. Jimmy is baking some cookies. In 30 minutes, he can bake 10% of the cookies. After every 2 hours of baking, he stops to rest for 1 hour. How long will Jimmy take to bake 80% of the cookies?
 - (1) 5 h
 - (2) 2 h
 - (3) 7 h
 - (4) 4 h

14.	Mary had 1360 yellow beads and some green beads at first. After buying
	170 red beads, 20% of her beads were green and red. What percentage of
	the beads were red beads in the end?

- (1) 7.5%
- (2) 10%
- (3) 12.5%
- (4) 25%

15. Jenny bought a bag and a wallet during a sale. Each item was given a 10% discount. She paid \$450 for the two items. Her savings for the bag was four times the savings on the wallet. What was the price of the bag before the sale?

- (1) \$40
- (2) \$50
 - (3) \$100
 - (4) \$400

SECTION B (20 marks)

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. All diagrams are not drawn to scale. Answers in fractions or ratio must be expressed in the simplest form.

16.	Arrange the	e following	numbers	from the	largest to	the smallest.

796 800 , 789 604 ,

, 798 600

789 406

Ann								
MID		•						
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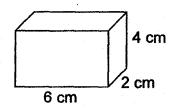
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17.	_	or a	numbe	าเร งบ	. vvna	it is -	_ or me	number?
	7						2	

Ans:

What is the number in the box?

Ans :

	ser ja ar garenjar s Juni yakili a Yannis (sainee alisa)	and Million (1995) Salah Saya Patra Sake Sant Saya Salah Salah Saya Saya Saya		
		e en		
		Aı	ns :	
20.	A movie started scree What time did the mo	5 p.m. It lasted	l 2 h 20 min.	
	vviat dine did the mo			
	vinat dine did the mo			

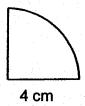


Ans			cm ³
7112	•		OH H

22.	The average age of three pupils is 12 years old. The youngest pupil is	7
	years old. What is the average age of the other 2 pupils?	

Ans				
	•	 		

23. Find the area of the quarter circle below. Take π = 3.14.



			100	40.7			٠.	
Ans	•	•				٠.		cm ²
,	•		 		·····			••••

24. Mr Tan spent $\frac{2}{5}$ of his salary on food. He spent $\frac{1}{2}$ of his remaining salary on transport. Find the ratio of the amount Mr Tan spent on food to the amount he spent on transport.

200	٠					
\ns						
	-	_	 	 	 	_

25.	Kevin bought a burger set for lunch and paid \$0.91 for 7% GST.									
	What was the cost of the burger set before GST?									

Ans	:	\$	
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Questions **26** 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. Answers in fractions or ratio must be expressed in the simplest form.

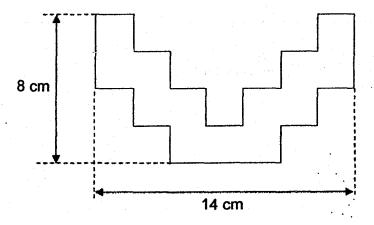
26. Find the value of
$$\frac{50 + 2a}{9} \div \frac{14a - 3}{5}$$
 when $a = 2$.

Ans	•				
ALI O	•			 	

27. Hamid went shopping with a sum of money. After spending $\frac{1}{3}$ of his money on a watch and \$56 on a tie, he was left with $\frac{3}{8}$ of the sum of money he had at first. How much did Hamid spend altogether?

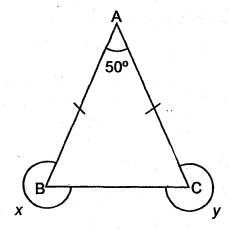
Ans: \$ _____

28. Thirteen square cards of identical size were placed without overlapping to form the composite figure shown below. Find the perimeter of the composite figure.



Ans: cm

29. The figure below, ABC is an isosceles triangle. Find the sum of \angle x and \angle y.



Ans : _____

Steph and Angie went on a vacation with the same amount of money. Each day, Steph spent \$230 while Angie spent \$190.At the end of their vacation, Steph had \$240 left while Angie had \$720 left. How many days were they on vacation?

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1112	٠		

End of Paper© Please check your work carefully ©

Setters: Lim Li Shan, Jacqueline Seto, Seah Nam Sin

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

Name: (
Form class: P6	Math Teacher:
Date: 24 August 2017	Duration: 1 h 40 min
Your Paper 2 Score (Out of 60 marks)	

INSTRUCTIONS TO CANDIDATES

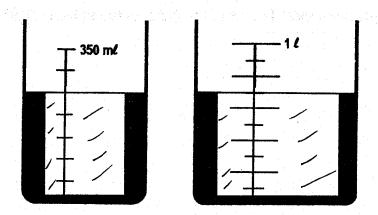
- 1. Do not turn over this page until you are told to do so.
- 2. Follow all instructions carefully.
- 3. Answer ALL questions and show all working clearly.
- 4. The use of calculator is allowed for this paper.

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.	
For questions which require units, give your answers in the units stated.	
All diagrams are not drawn to scale. (10 marks
	6.

1. Chloe bought 5*n* pens. She packed 8 pens into one box. After giving away 3 boxes, how many boxes of pens had she left? Give your answer in terms of *n*.

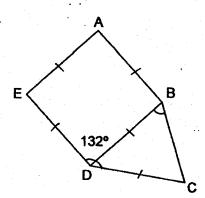
Ans : _____

2. Two containers with some water are shown below. Find the total volume of water in the two containers.



		•	
A			
Ans	•		m
, H10	•	100	 111

In the figure below, ABDE is a square and BCD is an isosceles triangle.
 Given that ∠ EDC = 132°, find ∠ DBC.

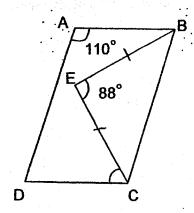


				,
Ans	٠			•
WI 10	٠			

4. Sally had some bottled drinks. 60% of the bottled drinks were coffee while the rest were tea. She bought more bottles of tea. In the end, 40% of the bottled drinks were coffee. What was the percentage increase in the number of bottles of tea when more bottles of tea were added to the bottled drinks?

Ans : ______%

5. ABCD is a parallelogram, \angle BAD = 110° and EB = EC. Find \angle ECD when \angle BEC = 88°.



Ans : ______

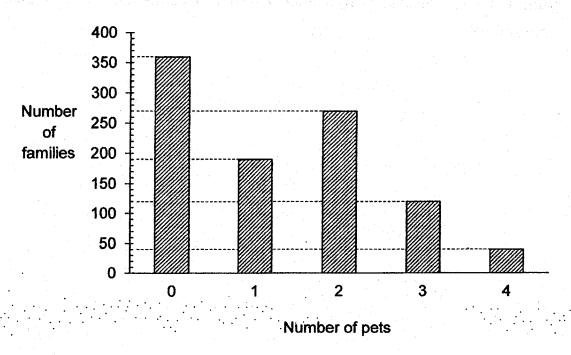
For questions 6 to 18, show your working clearly and write your answers in the spaces provided. The number of marks available is shown in brackets [] at the end of each question or part-question. (50 marks)

6. Three friends are folding paper butterflies to decorate the class noticeboard. To fold one paper butterfly, Carol takes 9 min, Diane takes 6 min and Edna takes only 4 min. They start folding at the same time. How many minutes will they take to fold 285 paper butterflies altogether?

Ans : ____[3]

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		ken pies left.					
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8. The bar graph shows the number of pets owned by families in a neighbourhood.



- (a) How many pets are there in the neighbourhood altogether?
- (b) What fraction of the families who own pets, have at least 3 pets? Give your answer in the simplest form.

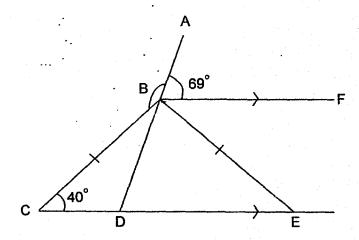
Ans: (a) ______[1]

(b) _____[2]

9. Adam had 110 more marbles than Ben. After Adam lost 129 marbles to Ben in a game, Ben had 5 times as many marbles as Adam. How many marbles did Ben have at first?

Ans	:	•	[3	1
	٠		1~	3

10. In the figure below, BF is parallel to CE. ABD is a straight line and BCE is an isosceles triangle. Find ∠ ABC.



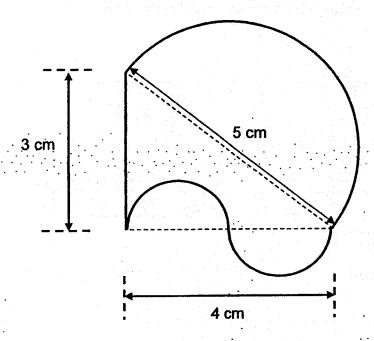
Ans	٠,				12	1
W112	•				ାଦ	1

11. Mrs Lee baked some cookies. She gave $\frac{1}{5}$ of them to her neighbours and packed $\frac{1}{3}$ of the remaining for her son's class party. When she baked another 594 cookies, she found that she now had twice the number of cookies she had baked at first. How many cookies did Mrs Lee give to her neighbours?

- 12. At a funfair, the ratio of the number of adults to the number of children was 3: 2. Among the children, the ratio of the number of girls to the number of boys was 4: 5. Each adult ticket cost \$10 and each child ticket cost \$6. A total of \$21 168 was collected from the ticket sale.
 - (a) What percentage of the people visiting the funfair were girls? Leave your answer as a fraction in its simplest form.
 - (b) How many boys visited the funfair?

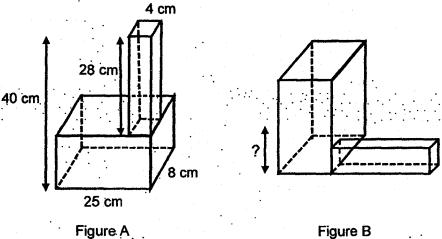
Ans:	(a)	 		[2]
	/h)			[2]

- 13. The figure below is formed by 1 large semicircle, 2 small identical semicircles and a straight line. The semicircles are formed along the edges of a right-angled triangle. The dimensions of the triangle are 3 cm, 4 cm and 5 cm.
 - (a) Find the perimeter of the figure.
 - (b) Find the area of the figure, correct to 2 decimal places. (Take π = 3.14)



Ans:	(a)	- 1			[2]

- 14. Figure A below shows a container of height 40 cm. It is made up of two portions. The top portion is a cuboid which has a square base of 4 cm and a height of 28 cm. The bottom portion is a cuboid with a rectangular base, measuring 25 cm by 8 cm. There are 2.656 litres of water inside the container.
 - (a) How much more water is needed to fill the container?
 - The container, containing 2.656 litres of water, is toppled as shown in (b) Figure B. Find the height of the water level in Figure B.



Ans	:	(a)	[2]

15.	Tim and Da	wi had ¢690	4 Times	1010 200	∕ of hiα :	manay ta	Davi D	nui than	
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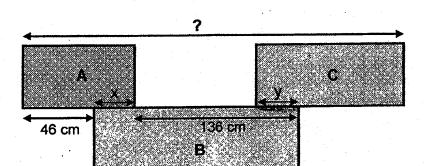
Ans : ___

[5]

16.	Meena bought son amount of money s amount of money s The amount of mo spent on rulers. Ho	spent on pens spent on eras ney spent on	was twice the a ers was 3 times pens was \$213.	amount spent on the amount sper 20 more than the	pencils. The nt on rulers. amount
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				Ans:	[4]

17. Sammy drew a figure made up of 3 different rectangles with identical breadth as shown below. The length of rectangle A is $\frac{5}{11}$ the length of rectangle B.

The length of rectangle C is $\frac{1}{2}$ of the total length of rectangle A and rectangle B. Length x is equal to length y. Find the length of the figure.



18. A car was travelling from Town A to Town B. At the same time, a van was travelling from Town B towards Town A. After travelling for 120 km, the car went past Gem Market at 08 30. At 10 00, the van passed by the car at the midpoint between Gem Market and Town B. The van reached Gem Market at 12 30. Both the van and the car did not change their speeds for the entire journey. What was the difference between the speed of the car and the van? [4]

End of Paper-

Please check your work carefully @

Setters: Jacqueline Seto, Lim Li Shan, Seah Nam Sin

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YEAR

: 2017

LEVEL

: PRIMARY 6

SCHOOL

: RAFFLES GIRLS' PRIMARY

SUBJECT

MATHEMATICS

TERM

PRELIMINARY EXAMINATION

Paper 1

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

Q16 798 600, 796 800, 789 604, 789 406

Q17 42

Q18 4.57

Q19 0.0875

Q20 1:35 am

Q21 48 cm³

Q22 14.5

Q23 12.56 cm²

Q24 4:3

Q25 \$13

 $\mathbb{Q}26 \frac{6}{5}$

Q27 \$120

Q28 56 cm

Q29 590°

Q30 12 days

Paper 2

Q1 No. of boxes at first
$$\Rightarrow \frac{5n}{8}$$

No. of boxes left
$$\Rightarrow \frac{5n}{8} - 3$$

 $\Rightarrow \frac{5n-24}{8}$

Q2 Total vol.
$$\rightarrow$$
 250 ml + 700 ml \Rightarrow 950 ml

Q3
$$\angle BDC = 132^{\circ} - 90^{\circ} \rightarrow 42^{\circ}$$

 $\angle DBC = (180^{\circ} - 42^{\circ}) \div 2 \Rightarrow \underline{69^{\circ}}$

Q5
$$\angle BAD = \angle BCD \rightarrow 110^{\circ}$$

 $\angle BCE = (180^{\circ} - 88^{\circ}) \div 2 \rightarrow 46^{\circ}$
 $\angle ECD = 110^{\circ} - 46^{\circ} \Rightarrow \underline{64^{\circ}}$

Q6 Total folded in 36 min =
$$(36 \div 4) + (36 \div 6) + (36 \div 9)$$

= $9 + 6 + 4$
= 19
No. of sets of 36 min = $285 \div 19$
= 15
Total mins = 15×36
 $\Rightarrow 540 \text{ min}$

RAFFLES PrELIM

Q7

$$1u + 70 - 450 = 5p$$

$$1u - 380 = 5p$$

$$1u - 121 = 12p$$

$$12u - 4560 = 60p$$

$$5u - 605 = 60p$$

$$2u - 4560 = 5u - 605$$

$$12u - 5u = 4560 - 605$$

$$7u \rightarrow 3955$$

$$1u \rightarrow \frac{3955}{7}$$

$$= 565$$
At first $\Rightarrow 2u + 70$

$$= (2 \times 565) + 70$$

$$\Rightarrow 1200 \text{ pies}$$

Q8 (a) Total pets =
$$(1 \times 190) + (2 \times 270) + (3 \times 120) + (40 \times 4)$$

 $\Rightarrow 1250 \text{ pets}$

(b) Total families with pets =
$$190 + 270 + 120 + 40 \rightarrow 620$$

Families with 3 or more = $120 + 40 \rightarrow 160$
Fractions $\rightarrow \frac{160}{620} \Rightarrow \frac{8}{31}$

Q9
$$5u - 129 + 110 = 1u + 129$$

 $5u - 19 = 1u + 129$
 $5u - 1u = 129 + 19$
 $4u \rightarrow 148$
 $1u \rightarrow \frac{148}{4} = 37$
 $(5u) \rightarrow 37 \times 5 = 185$
Ben at first $\rightarrow 185 - 129 \Rightarrow \underline{56}$ marbles

Q10
$$\angle$$
BCD = \angle BED = \angle EBF \rightarrow 40°
 \angle DBE = 180° - (69° + 40°) \rightarrow 71°
 \angle CBE = 180° - (40° X 2) \rightarrow 100°
 \angle CBD = 100° - 71° \rightarrow 29°
 \angle ABC = 180° - 29° \Rightarrow 151°

Q11 Neighbours
$$\rightarrow \frac{1}{5}$$
 of total

Remaining $\rightarrow 1 - \frac{1}{5}$

$$= \frac{4}{5}$$
 of total

Son's class party
$$\rightarrow \frac{1}{3}$$
 o R

At first
$$\rightarrow \frac{15}{15}$$

After baking more
$$\Rightarrow \frac{15}{15} \times 2 = \frac{30}{15}$$

$$\frac{30}{15} - \frac{8}{15} = \frac{22}{15}$$

$$\frac{22}{15} \rightarrow 594$$

$$\frac{1}{5} = \frac{3}{15}$$

$$\frac{3}{15} \rightarrow \frac{594}{22} \times 3 \Rightarrow \underline{81 \text{ cookies}}$$

RAFFLES REGUM

Total (u)
$$\rightarrow 27u + 18u = 45u$$

% Girls
$$\rightarrow \frac{8}{45} \times 100\% \Rightarrow 17\frac{7}{9}\%$$

- (b) (u) \$ collected from $A \rightarrow 27u \times 10 = 270u$
 - (u) \$ collected from $G \rightarrow \$u \times 6 = 4\u
 - (u) \$ collected from B $\rightarrow 10u \times 6 = 60u$

Total
$$\rightarrow$$
 270u + 48u + 60u = 378u
378u \rightarrow 21168

$$1u \rightarrow \frac{21168}{378} = 56$$

$$B (10u) \rightarrow 56 \times 10 \Rightarrow \underline{560 \text{ boys}}$$

Q13 (a) Diameter of small semi

Perimeter of 2 small semi
$$\rightarrow \pi \times d$$

= 3.14 x 2
= 6.28

Perimeter of 1 big semi
$$\rightarrow \pi \times d \times \frac{1}{2}$$

$$= 3.14 \times 5 \times \frac{1}{2}$$

$$= 7.85$$

Perimeter of figure
$$\rightarrow$$
 7.85 + 6.28 + 3 \Rightarrow 17.13 cm

(b)
$$\triangle \to \frac{1}{2} \times 3 \times 4 = 6$$

 $5 \div 2 = 2.5$
Semi $\to \pi \times r \times r \times \frac{1}{2}$
 $= 3.14 \times 2.5 \times 2.5 \times \frac{1}{2} = 9.8125$
 ≈ 9.81

Total area
$$\rightarrow 6 + 9.81 \Rightarrow 15.81 \text{ cm}^2$$

Q14 (a) Height of bottom cuboid
$$\rightarrow 40-28=12$$
Water in bottom cuboid $\rightarrow 12 \times 25 \times 8 = 2400 \text{ cm}^3$
Capacity of top $\rightarrow 28 \times 4 \times 4 = 448 \text{ cm}^3$
Total capacity $\rightarrow 2400 + 448 = 2848 \text{ cm}^3$
 $2.656 \ell = 2656 \text{ m}\ell$
Water to be filled $\rightarrow 2848 - 2656 \Rightarrow 192 \text{ cm}^3$

(b)
$$2656 - 448 = 2208$$
 (in bottom cuboid)
Base of bottom $\rightarrow 8 \times 12 = 96$
 $2208 \div 96 \Rightarrow 23 \text{ cm}$

RAFFLES PRELIM

Q15 T at first
$$\rightarrow 100u$$
R at first $\rightarrow 100p$
 $100u + 100p \rightarrow 6894$
T gave $\rightarrow 20u$
T left $\rightarrow 80u$
R now $\rightarrow 100p + 20u$
R spent $\rightarrow 40p + 8u$
R left $\rightarrow 60p + 12u = 5518$
 $92u + 60p = 5518$
 $100u + 100p = 6894$
 $460u + 300p = 27590$
 $300u + 300p = 20682$
 $100u \rightarrow \frac{6908}{160} \times 100$
 $= 4317.50$
R at first $(100p) \rightarrow 6894 - 4317.50 \Rightarrow 2576.50

Q16
$$R \rightarrow 2u$$

 $E \rightarrow 6u$
Pen $\rightarrow 2u + 213.20$
Pencil $\rightarrow 1u + 106.60$
 $2u + 6u + 2u + 213.20 + 1u + 106.60 = 1718.45$
 $11u + 319.80 = 1718.45$
 $11u \rightarrow 1398.65$
 $1u \rightarrow 127.15$
 $2u + 6u = 8u$
 $8u \rightarrow 127.15 \times 8 \Rightarrow 1017.20

Q17
$$11u - 5u = 6u$$

 $6u \rightarrow 136 - 46 = 90$
 $1u \rightarrow \frac{90}{6} = 15$

Overlapped
$$\rightarrow$$
 (15 x 5) - 46 = 29
A B C \rightarrow 24 x 15 = 360
Length \rightarrow 360 - 29 - 29 $\stackrel{\triangle}{\Rightarrow}$ 302 cm

$$3 \text{ u} \rightarrow \frac{120}{2} \text{ x } 3 = 180$$

Van speed
$$\rightarrow 180 \div 2\frac{1}{2} = 72 \text{ km/h}$$

Difference
$$\rightarrow$$
 (72 ÷ 3) x 2 \Rightarrow 48 km/h