RAFFLES GIRLS' PRIMARY SCHOOL
SEMESTRAL ASSESSMENT 1
MATHEMATICS (PAPER 1)
PRIMARY 6

Name: _____ (   )

Form Class: P6 _____   Math Teacher: _____

Date: 7 May 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. Express $4\frac{4}{5}$ as a decimal.

   (1) 4.40

   (2) 4.45

   (3) 4.54

   (4) 4.80

2. $208\ 709 = 200\ 000 +$ _____ $+ 700 + 9$

   (1) 80 000

   (2) 8000

   (3) 800

   (4) 80

3. What is the missing fraction in the box?

$$\frac{13}{6} + \frac{2}{3} = \boxed{}$$

   (1) $1\frac{2}{3}$

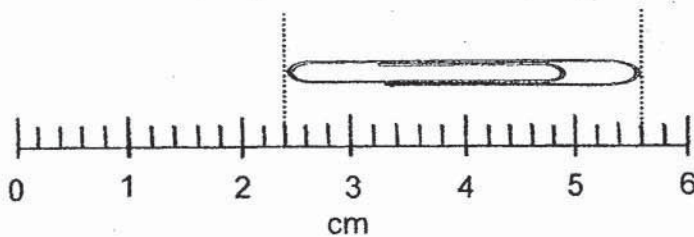   (2) $1\frac{5}{9}$

   (3) $2\frac{1}{2}$

   (4) $2\frac{5}{6}$

4. A durian is $2\frac{1}{4}$ times as heavy as an apple.

What is the ratio of the mass of the durian to the mass of the apple?

(1) $7:4$

(2) $4:7$

(3) $9:4$

(4) $4:9$

5. Find the value of $x + \dfrac{x}{5}$ when $x = 5$.

(1) 10

(2) 6

(3) 5

(4) $1\dfrac{1}{5}$

6. What is the length of the paper clip shown below?

(1) 1.6 cm

(2) 2.4 cm

(3) 3.2 cm

(4) 5.6 cm

7.

Arrange the following fractions from the largest to the smallest.
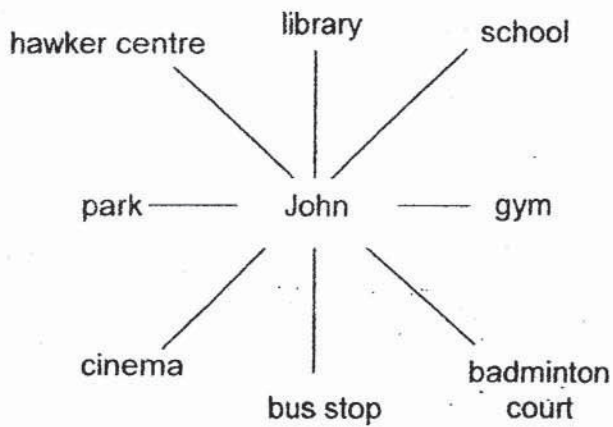
$$\frac{4}{7} \ , \ \frac{2}{3} \ , \ \frac{5}{6}$$

(1) $\quad\frac{5}{6} \ , \ \frac{2}{3} \ , \ \frac{4}{7}$

(2) $\quad\frac{2}{3} \ , \ \frac{4}{7} \ , \ \frac{5}{6}$

(3) $\quad\frac{4}{7} \ , \ \frac{2}{3} \ , \ \frac{5}{6}$

(4) $\quad\frac{5}{6} \ , \ \frac{4}{7} \ , \ \frac{2}{3}$

8.

hawker centre   library   school

park —— John —— gym

cinema   bus stop   badminton court
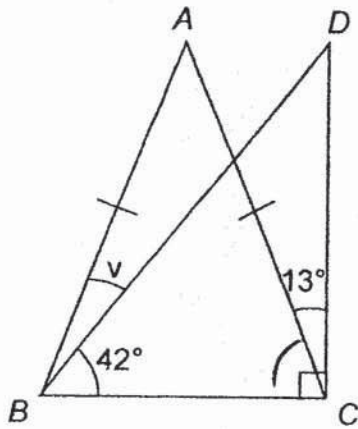
John is facing the school. After he turns 135° anti-clockwise, he will be facing the _____.

(1) park

(2) cinema

(3) bus stop

(4) badminton court

9. Express $\frac{1}{25}$ as a percentage.

    (1)   0.25 %

    (2)   4 %

    (3)   25 %

    (4)   40 %

10. ABC is an isosceles triangle. DBC is a right-angled triangle. Find $\angle v$.
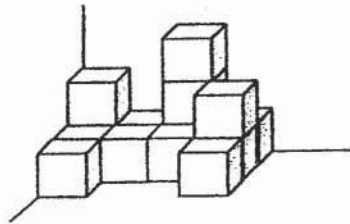

    (1)   35°

    (2)   48°

    (3)   55°

    (4)   77°

11. A shop sells 3 pens for $2 and 5 pencils for $3. John bought an equal number of pens and pencils. What was the least amount he could have spent?

    (1) $6
    (2) $15
    (3) $19
    (4) $21

12. The figure is made up of 1-cm cubes. Rajah wants to form a cube of sides 4 cm. How many more 1-cm cubes does he need?

    (1) 14
    (2) 16
    (3) 50
    (4) 64

13. Xiao Ming had the same number of 20-cent and 50-cent coins. He had a total of $14.70. What was the total value of all the 20-cent coins?

    (1) $4.20
    (2) $6.30
    (3) $10.50
    (4) $21.00

14. Mrs Tan spent 5% of her salary on transport and 40% of the remaining salary on household expenses. What percentage of her salary was left?

    (1) 38 %
    (2) 43 %
    (3) 55 %
    (4) 57 %

15. In a book fair, the ratio of the number of comic books to the number of magazines was 5 : 7. After selling 12 comic books to the shoppers, the ratio of the number of comic books left to the number of magazines left was 3 : 5. How many magazines were there in the end?

    (1) 63
    (2) 75
    (3) 105
    (4) 168

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.

16. Evaluate $40 \div 2 \times 10 + 5$

Ans: _____

17. A box of markers cost $9.60. Mrs Tan bought 78 boxes of markers. How much did she pay altogether?
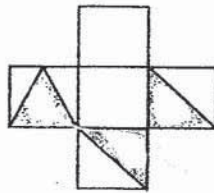
Ans: $ _____

18. Find the value of $13 - 2.87$

Ans: _____

19.   The subway trains depart at intervals of 15 minutes. Find the time of departure of the fifth train if the first train departs at 4.15 p.m.

Ans: _____ p.m.

20.   The figure is made up of 5 squares. What fraction of the figure is shaded?

Ans: _____

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 spaces provided. For questions which require units, give your answers in the units stated. All diagrams are not drawn to scale.
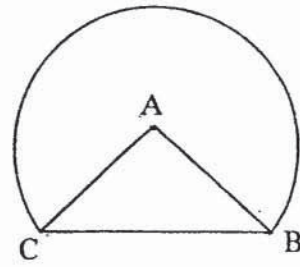
21. John spends $\$\frac{y}{7}$ everyday on food. How much does he spend on food in 2 weeks?

Ans: $ _____

22. Josh is $1\frac{7}{10}$ m tall. He is $\frac{3}{5}$ m taller than Kristen. What is their total height? Leave your answer in the simplest form.

Ans: _____ m

23. The figure shows a $\frac{3}{4}$ circle of diameter 14 cm. A is the centre of the circle. Find the area of triangle ABC.

Ans: _____ cm²

24. The average of 4 numbers was 21. When a number was added, the average became 23. What was the value of the number added?

Ans: _____

25. Terry started cycling from Town A to Town B at noon. At the same time, Jim started cycling from Town B to Town A. They met each other at 2 p.m. The speed of Terry is twice as fast as Jim. Given that the distance between Town A and Town B is 45 km, find Jim's speed.

Ans: _____ km/h

26. It takes 3 men to paint a block of flats completely in 22 days. Each man takes equal number of days to paint a block of flats. How many days will it take 2 men to paint 3 similar block of flats completely?

Ans: _____

27. A container has a mass of 3.8 kg when it is $\frac{3}{5}$ filled with water. Its mass becomes 3.3 kg when it is $\frac{1}{2}$ filled with water. What is the mass of the empty container?
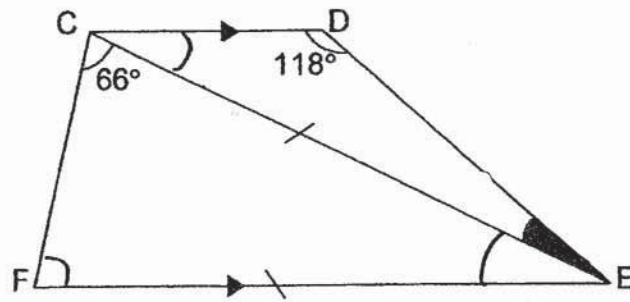
Ans: _____ kg

28. The figure is made up of 2 squares, A and B. $\frac{1}{4}$ of A is shaded and $\frac{1}{9}$ of B is shaded. The area of the shaded part is 5 cm². Find the area of the figure.
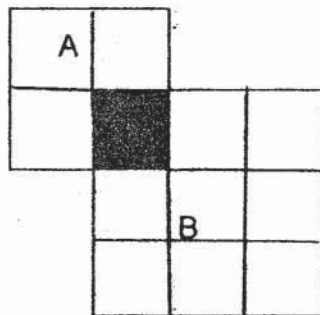
Ans: _____ cm²

29. The figure shows a trapezium CDEF and an isosceles triangle CEF.
Find ∠CED.

Ans: _____ °

30. Mdm Goh had 6 kg of sugar. She wanted to repack the sugar into identical packets. Each packet has a mass of $\frac{4}{5}$ kg.

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

	True	False	Impossible to tell
a) Mdm Goh had 8 packets of $\frac{4}{5}$ kg of sugar after repacking.			
b) If Mdm Goh had 8 kg of sugar, she would be able to repack all the sugar into identical packets of $\frac{4}{5}$ kg without any remainder.			

End of Paper
☺ **Please check your work carefully** ☺

RAFFLES GIRLS' PRIMARY SCHOOL
SEMESTRAL ASSESSMENT 1
MATHEMATICS (PAPER 2)
PRIMARY 6

Name: _____ (   )

Form class: P6 _____   Math Teacher: _____

Date: 7 May 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.
For questions which require units, give your answers in the units stated.
All diagrams are not drawn to scale.   (10 marks)

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1. Ann has x stickers. Betty has (x + 5) more stickers than Ann. How many stickers do they have altogether?

Ans : _____ [2]

2. What is the price of the chandelier after the discount?

Usual price : $568

Discount : 15 %

Ans : $ _____ [2]

3. Mrs Wong sold $\frac{1}{4}$ of her chicken pies in the morning. She sold another 36 chicken pies in the afternoon. If the ratio of the total number of chicken pies sold to the number of chicken pies left was the same, how many chicken pies did she have at first?

Ans : _____ [2]

4. Kim bought 3 soccer balls for $90. She also bought an equal number of identical volley balls but at a different price. The average price of all the balls she bought was $26. What was the price of each volleyball?

Ans : $ _____ [2]

5. ABCD is a square and STUV are midpoints of AB, BC, CD and DA respectively.
    Find $\angle BTU$.
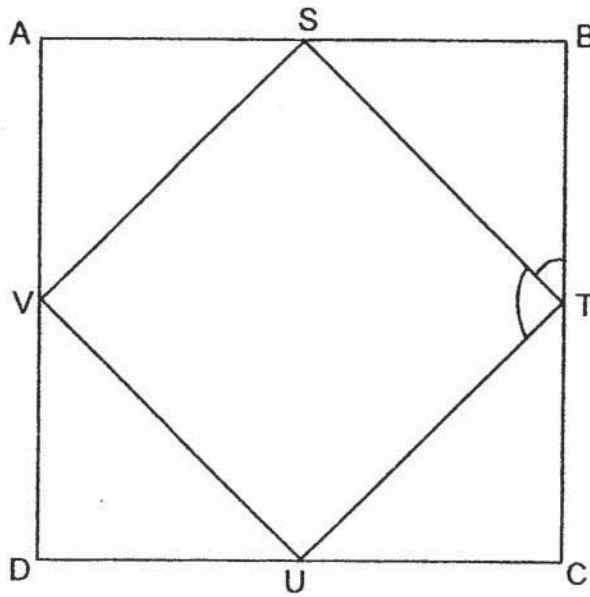
Ans: _____ [2]

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 brackets [   ] at the end of each question or part-question. All diagrams are not drawn to scale.

(45 marks)

6. The cost of admission tickets for 2 adults and 3 children to Curo Theme Park is $183. The cost of admission tickets for 3 adults and 2 children is $192. What is the cost of 1 adult ticket?

Ans: _____ [3]

7. Fathin receives $0.80 more pocket money than Halim every day. Each of them spends $1.40 a day and saves the rest of their pocket money. If Halim saves $50 and Fathin saves $90, how much pocket money does Halim receive for a day?
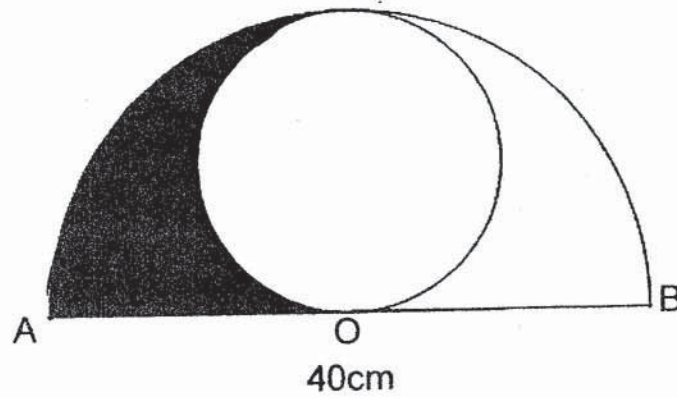
Ans: _____ [3]

8. EFGH is a rectangular piece of paper folded along JK. ∠JKG = 22°.
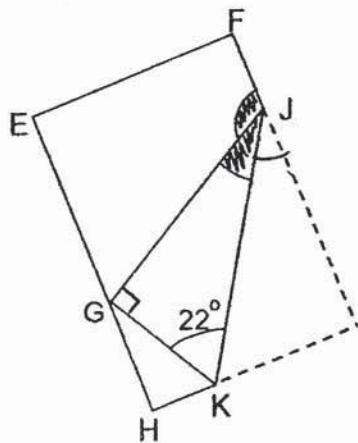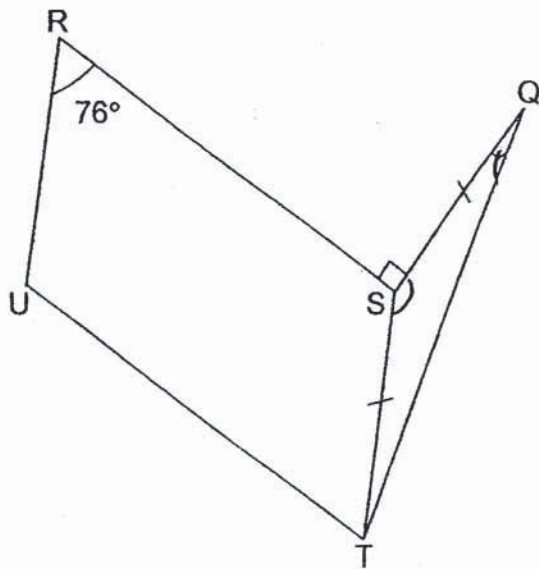

(a) Find ∠GJK.

(b) Find ∠GJF.

Ans: a) _____ [1]

b) _____ [2]

9. The figure is made up of a circle and a semicircle. O is the centre of the semicircle. Given that the length of AOB is 40 cm, find the perimeter of the shaded part.

Take $\pi = 3.14$

40cm

Ans: _____ [3]

10. RSTU is a parallelogram. SQT is an isosceles triangle.
    ∠URS is 76°. Find ∠SQT.

Ans:_____ [3]

11. Jane and Ella travelled from Town A to Town B. Jane started earlier at 1 p.m. and travelled at 85 km/h. She took 1 h 48 min. Ella started later and travelled at 90 km/h. She arrived at Town B at the same time as Jane. What time did Ella leave Town A? (Leave your answer in 12-hour clock)

Ans: _____ [4]

12. Ali, Ben and Devi had equal number of beads. Ali packed all his beads equally into 3 packets. Ben packed all his beads equally into 6 packets. Devi packed all her beads equally into 9 packets. 1 packet of Ali's beads, 3 packets of Ben's beads and 4 packets of Devi's beads added up to 759. How many beads did they have altogether?
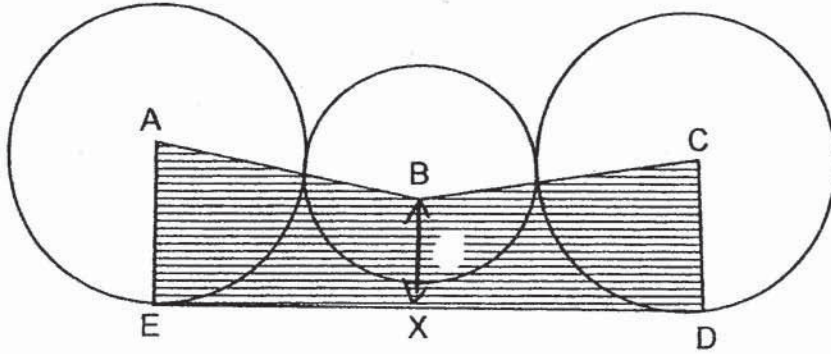
Ans: _____ [4]

13. Shawn and Josh each had the same amount of syrup for making lemonade. The same amount of syrup was used for making each cup of lemonade. Shawn made 30 cups of lemonade and had 552 ml of syrup left. Josh made 6 cups of lemonade and had 1.2 litres of syrup left.

(a) What was the volume of syrup needed to make 1 cup of lemonade?

(b) What was the maximum number of cups of lemonade that can be made with the remaining syrup left from both the boys?

Ans: a) _____ [2]

b) _____ [2]

14. A, B and C are the centres of Circle A, Circle B, and Circle C respectively. The radius of Circle A and Circle C is 12 cm, and the radius of Circle B is 8 cm. The length of BX is 9 cm and the perimeter of figure ABCDE is 102 cm. Find the area of the shaded figure.

Ans: _____ [4]

15. At a concert, the price of admission ticket of each adult was $120 and the price of admission ticket of each child was $70. On the first day, there were 1300 people. 640 of them were adults and the rest were children. On the second day, there were 880 adults at the concert and the number of children increased by 30%.

(a) What was the percentage increase of the adults on the second day?

(b) How much money was collected at the concert on the second day?

Ans: a) _____ [1]

b) _____ [3]

16. During an event, Mrs Wang ordered 880 buns and tarts from a bakery. The cost of a tart was $1.50 and it was 3 times the cost of a bun. $\frac{3}{5}$ of the tarts and $\frac{2}{7}$ of the buns were eaten. The number of tarts and buns left was 550.

(a) How many buns were eaten?

(b) How much did Mrs Wang paid in total for the buns?

Ans: a) _____ [4]

b) _____ [1]

17. The ratio of the number of pupils in 6H to the number of pupils in 6J was 4 : 9.
140 magazines were given to the pupils to be shared so that each pupil in 6H received 2 magazines while each pupil in 6J received 3 magazines.

(a) How many pupils were there in 6J?

(b) $66\frac{2}{3}\%$ of the pupils in 6J had decided to give $\frac{8}{9}$ of their magazines to the pupils in 6H to be shared out equally. What was the new number of magazines each of these pupils have in 6H after receiving them from the pupils in 6J?

Ans: a) _____ [2]

b) _____ [3]

End of Paper
Please check your work carefully ☺

Answer Key & Worked Solutions

Raffles Paper

P6 Mathematics SA1 2018

Paper 1

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
4	2	4	3	2	3	1	1	2	1

Q11	Q12	Q13	Q14	Q15
3	3	1	4	3

Q16) 205   Q17) $748.80   Q18) 10.13   Q19) 5:15pm   Q20) $\frac{3}{10}$

Q21) $2y   Q22) $2\frac{4}{5}$ m   Q23) 24.5 cm^2 Q24) 31   Q25) 7.5 km/h

Q26) 99 days   Q27) 0.8 kg   Q28) 60 cm^2 Q29) 14°   Q30)
a) False
b) True

Paper 2

Q1. Betty's stickers → x + x + 5 = 2x + 5
     Total stickers → x + 2x + 5 = (3x + 5)

Q2. 100% - 15% → 85%
     568 x 85% → $482.80

Q3. $\frac{1}{4}$ + $\frac{1}{4}$ = $\frac{2}{4}$ = $\frac{1}{2}$
     36 + 36 = 72
     1 - $\frac{1}{2}$ = $\frac{1}{2}$
     $\frac{1}{2}$ → 72
     1 → 72 x 2 → 144 chicken pies

Q4. 3 + 3 = 6
     26 x 6 = 156 (total cost)
     156 – 90 = 66 (cost of volley balls)
     66 ÷ 3 → $22

Q5. 180° 4 x 3 → 135°

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

6. Difference between adult and children's ticket cost = 192 − 183 = $9

Total ticket cost of 5 adults and 5 children = 183 + 192 = 375
Ticket cost of 1 adult and 1 child = 375 ÷ 5 = $75

Child ticket cost = (75 − 9) ÷ 2 = $33
Adult ticket cost = 33 + 9 = $42

Ans: $42

7. Difference between savings of Fathin and Halim = 90 − 50 = 40

Number of days = 40 ÷ 0.80 = 50

Halim's savings per day = 50 ÷ 50 = $1

Halim's pocket money per day = 1 + 1.40 = $2.40

Ans: $2.40

8.   a)   ∠GJK = 90 – 22 = 68°

        b)   ∠GJF = 180 – 68 – 68 = 44°

Ans: (a) 68°
            (b) 44°

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9.   Perimeter of quadrant = $\frac{1}{4}$ x π x 40 = 10π

Perimeter of small semi-circle = $\frac{1}{2}$ x π x 20 = 10π

Perimeter of shaded part = 10π + 10π + 20 = 20π + 20 = 82.8 cm

Ans: 82.8 cm

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10. $\angle$ RST = 180 – 76 = 104°

$\angle$ QST = 360 – 90 – 104 = 166°

$\angle$ SQT = (180 – 166) ÷ 2 = 7°

Ans: 7°

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11. 1 hr 48 min = $1\frac{48}{60}$ = $1\frac{4}{5}$ = 1.8 hr

Arrival time of Jane = 1 + 1hr 48 min = 2: 48 pm

Distance between Town A and B = 85 x 1.8 = 153 km

Time taken by Ella = 153 ÷ 90 = 1.7 hr = 1 hr 42 min

Departure time of Ella = 2hr 48 min – 1 hr 42 min = 1:06 pm

Ans: 1:06 pm

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12.   Let number of beads each have = 18n

Number of beads in 1 packet of Ali's beads = 18n ÷ 3 = 6n

Number of beads in 1 packet of Ben's beads = 18n ÷ 6 = 3n
Number of beads in 3 packet of Ben's beads = 3n x 3 = 9n

Number of beads in 1 packet of Devi's beads = 18n ÷ 9 = 2n
Number of beads in 4 packet of Devi's beads = 2n x 4 = 8n

1 pack of Ali's + 3 packs of Ben's + 4 packs of Devi's beads = 6n + 9n + 8n = 759
23n = 759
n = 759 ÷ 23 = 33

Total number of beads they had altogether = 18n x 3 = 18 x 33 x 3 = 1782

Ans: 1782

13.   a)
Difference in volume between 30 cups and 6 cups = 1200 – 552 = 648 mℓ

Diffence in number of cups = 30 – 6 = 24

Volume of 1 cup of lemonade = 648 ÷ 24 = 27 mℓ

b)
Volume of remaining syrup = 552 + 1200 = 1752 mℓ

Number of cups from remaining syrup = 1752 ÷ 27 = 64.888 ≈ 64 cups maximum

Ans: (a) 27 mℓ

(b) 64 cups

14.   AB = BC = 12 + 8 = 20 cm

AE = CD = 12 cm

DE = 102 – 20 – 20 – 12 – 12 = 38 cm

Area of lower portion rectangle of ABCDE = 38 x 9 = 342 cm^2

Area of upper 2 triangles of ABCDE = Height x base = (12 – 9) x 19 = 57 cm^2

Area of shaded figure = 342 + 57 = 399 cm^2

Ans: 399 cm^2

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15.   a)
Increase of adults on second day = 880 – 640 = 240

Percentage increase = 240 ÷ 640 x 100 = 37.5%

b)
Number of children on first day = 1300 – 640 = 660
Increase in number of children on second day = 660 x 30 ÷ 100 = 198

Number of children on second day = 660 + 198 = 858

Ticket sales on second day = 880 x 120 + 858 x 70 = 105 600 + 60 060 = $165 660

Ans: (a) 37.5%
         (b) $165 660

16.   a)
Let number of tarts at first = 5t
Number of buns at first = 7b

5t + 7b = 880   (1)
2t + 5b = 550   (2)

10t + 14b = 1760   (3) = (1) x 2
10t + 25b = 2750   (4) = (2) x 5

11b = 990   (5) = (4) – (3)
b = 990 ÷ 11 = 90

Number of buns eaten = 2b = 2 x 90 = 180

b)
Total cost of buns = 7b x 0.5 = 7 x 90 x 0.5 = $315

Ans: (a) 180

(b) $315

17. a)

Ratio of number of magazines in 6H to 6J → 4u x 2: 9u x 3 → 8u : 27u

8u + 27u = 140

35u = 140

u = 140 ÷ 35 = 4

Number of pupils in 6J = 9u = 9 x 4 = 36

b)

$66\frac{2}{3}$ % of pupils in 6J = $66\frac{2}{3}$ ÷ 100 x 36 = 24

Number of magazines received by 24 6J students = 24 x 3 = 72

$\frac{8}{9}$ of 72 magazines = $\frac{8}{9}$ x 72 = 8 x 8 = 64

Number of pupils in 6H = 4u = 4 x 4 = 16

Total number of magazines in 6H = 16 x 2 + 64 = 96

Number of magazines each pupil in 6H had in the end = 96 ÷ 16 = 6

Ans: (a) 36 pupils

(b) 6 magazines