603 / SA1 / 12

RAFFLES GIRLS' PRIMARY SCHOOL
MID-YEAR EXAMINATION
PRIMARY 6

Name: _____ ( ) Form Class: P6_____

Date: 10 May 2022 Math Teacher: _____

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	

MATHEMATICS
PAPER 1
(BOOKLET A)

Total time for Booklets A and B: 1 hour

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 **NOT** allowed.

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. (20 marks)

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1. In 7 435 602, the digit 3 is in the _____ place.

   (1) hundreds
   (2) thousands
   (3) ten thousands
   (4) hundred thousands

2. How many quarters are there in $6\frac{3}{4}$?

   (1) 13
   (2) 22
   (3) 27
   (4) 36

3. Express $\frac{15}{8}$ as a decimal.

   (1) 1.58
   (2) 1.625
   (3) 1.78
   (4) 1.875

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

$2\frac{1}{4}$, $\frac{16}{9}$, $\frac{17}{8}$

	Largest				Smallest
(1)	$2\frac{1}{4}$	,	$\frac{17}{8}$	,	$\frac{16}{9}$
(2)	$2\frac{1}{4}$	,	$\frac{16}{9}$	,	$\frac{17}{8}$
(3)	$\frac{17}{8}$	,	$2\frac{1}{4}$	,	$\frac{16}{9}$
(4)	$\frac{16}{9}$	,	$\frac{17}{8}$	,	$2\frac{1}{4}$

5. Haris bought a packet of milk from the canteen. Which of the following could be the volume of the packet of milk?

(1) 3 mℓ

(2) 30 mℓ

(3) 300 mℓ

(4) 3000 mℓ

6. Donuts were sold in a shop as shown. Maria bought 54 donuts for her son's birthday party. How much did she pay for the donuts?

6 donuts for $16

(1) $96

(2) $144

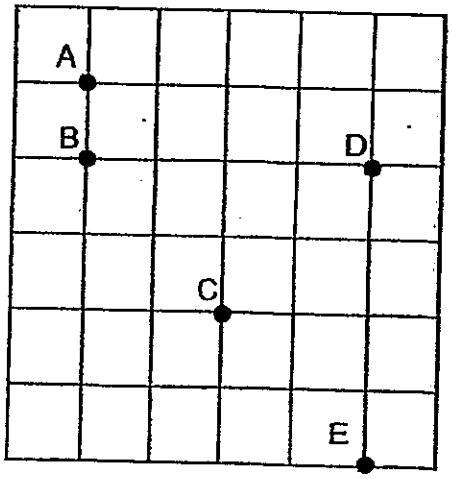
(3) $324

(4) $864

7. The number of chickens is $\frac{5}{6}$ of the number of ducks in a farm. Find the ratio of the number of chickens to the total number of ducks and chickens in the farm.

(1) 5 : 6
(2) 5 : 11
(3) 6 : 5
(4) 6 : 11

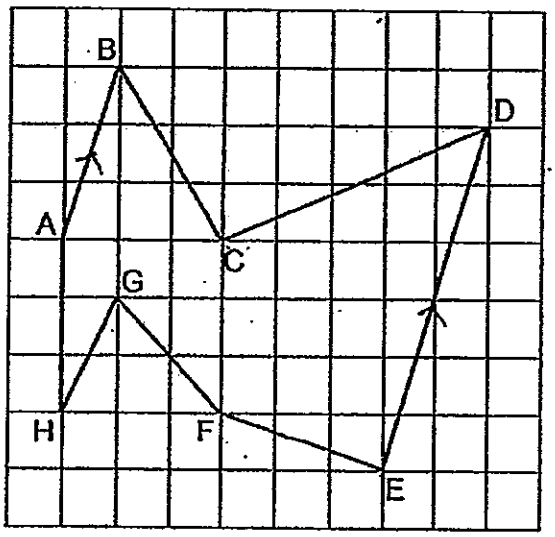
8.



In the square grid, point C is south-east of point_____.

(1) A
(2) B
(3) D
(4) E

9. Which pair of lines are parallel to each other?



(1) AB and HG

(2) BC and GF

(3) CD and FE

(4) DE and AB

10. A fish tank measures 20 cm by 30 cm by 50 cm. It contains 4.8 ℓ of water. What percentage of the tank is filled with water?

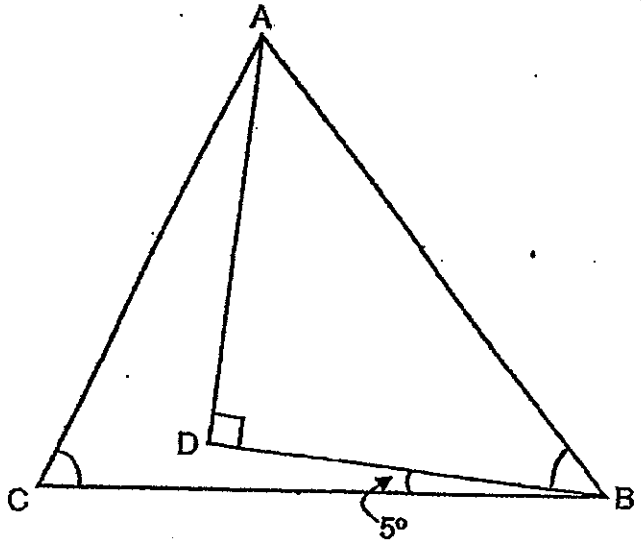
(1) 1.6%

(2) 0.84%

(3) 16%

(4) 84%

11. ABD is a right-angled isosceles triangle. ABC is an isosceles triangle, AB = BC. Find ∠ACB.



(1) 45°

(2) 50°

(3) 65°

(4) 80°

12. Rick had $900. He spent 30% of his money on a mini refrigerator and spent 90% of the remaining money on a camera. How much money did he spend on the camera?

(1) $270

(2) $567

(3) $630

(4) $810

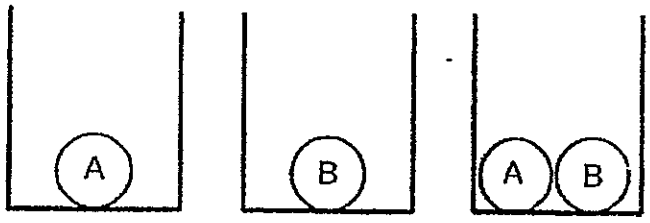
13. What is the missing number?

(1) 2.092
(2) 20.92
(3) 209.2
(4) 20920

14. The ratio of the number of roses to the number of carnations is 5 : 6. The ratio of the number of sunflowers to the number of carnations is 7 : 3. There are 180 fewer roses than sunflowers. How many carnations are there?

(1) 20
(2) 60
(3) 120
(4) 270

15. The mass of a container with Ball A in it is 4170 g. The mass of the same container with Ball B in it is 4650 g. The total mass of the same container with both Ball A and Ball B in it is 6170 g. What is the mass of the container?



(1) 480 g
(2) 1520 g
(3) 2000 g
(4) 2650 g

RAFFLES GIRLS' PRIMARY SCHOOL
MID-YEAR EXAMINATION
PRIMARY 6

Name: _____( ) Form Class: P6_____

Date: 10 May 2022 Math Teacher: _____

MATHEMATICS

PAPER 1

(BOOKLET B)

Total time for Booklets A and B: 1 hour

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 **NOT** allowed.

Questions 16 to 20 carry 1 mark each. Write your answers in the spaces provided. For questions that require units, give your answers in the units stated. All diagrams are not drawn to scale. (5 marks)

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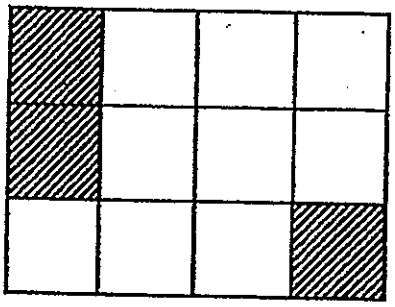
16. Find the value of $8 + (20 - 16 \div 2) \times 3$.

Ans: ____ ____

17. The figure is made up of squares. How many more squares have to be shaded so that $\frac{2}{3}$ of the figure is shaded?



Ans: _____

18. Arrange the following from the greatest to the smallest.

2.704 , 2.074 , 2.74

Ans: _____, _____, _____
Greatest

19. The table shows the number of books donated by some classes. What is the average number of books donated?

Name	Books
Pri 6 Gratitude	56
Pri 6 Courage	0
Pri 6 Generous	60
Pri 6 Caring	44

Ans: _____

20. Edward left his house at 08 55. He took 15 min to reach the beach. He left the beach at 12 25. How long was he at the beach?
Give your answer in h and min.

Ans: _____h_____min

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 that require units, give your answers in the units stated. All diagrams are not drawn to scale.

(20 marks)

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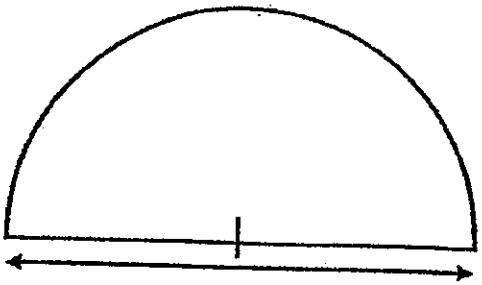
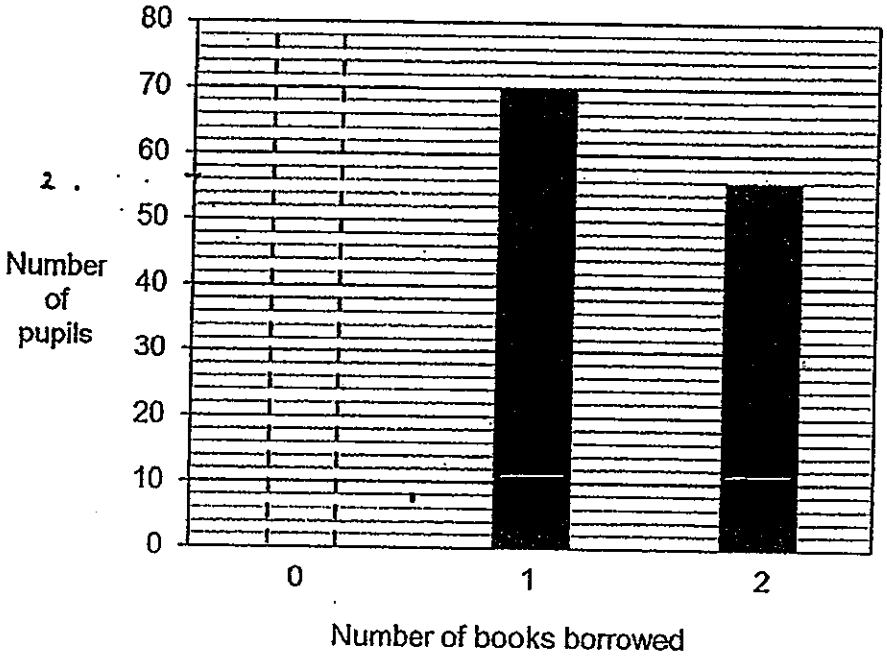
21. Find the area of the figure. Take $\pi = \frac{22}{7}$.



28 cm

Ans: _____ cm^2

22. The bar graph shows the number of books borrowed by the P6 pupils in a month. $\frac{7}{9}$ of the pupils borrowed at least 1 book. How many pupils did not borrow any book?



Ans: _____

23. Mr Karim had 17 ℓ of cooking oil. He used 0.64 ℓ of cooking oil. He poured the remaining cooking oil equally into 8 containers. How many litres of cooking oil were there in each container? Round your answer to 1 decimal place.

Ans: _____ ℓ

24. Jeanette had a piece of string $\frac{2}{7}$ m long. She cut it into $\frac{1}{9}$-m equal pieces.

(a) How many $\frac{1}{9}$-m pieces of string were there at most?

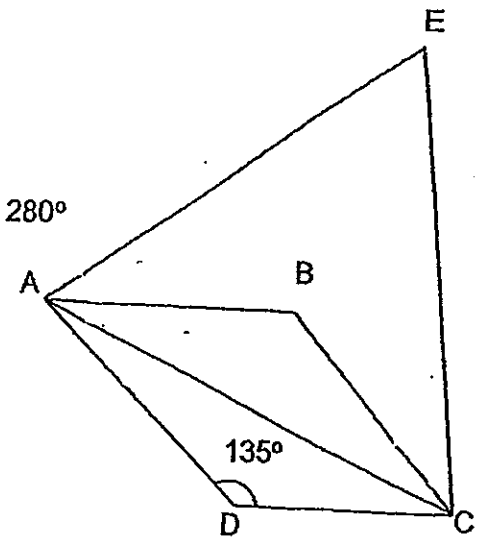
(b) What was the length of the piece of string left over?

Ans : (a) _____

(b) _____ m

25. ABCD is a trapezium. AB is parallel to DC. AEC is an equilateral triangle.

Find ∠BAC.



Ans: _____ °

26. The table shows the charges for the rental of a minibus.

First 2 hours	$90
Every additional hour	$40

A group of tourists paid $330 for the rental of a minibus. How many hours did they rent the minibus for?

Ans: _____ h

27. The figure shows 2 stacks of identical traffic cones. There are 4 traffic cones in Figure A and 8 traffic cones in Figure B. What is the height when 16 traffic cones are put together in one stack?

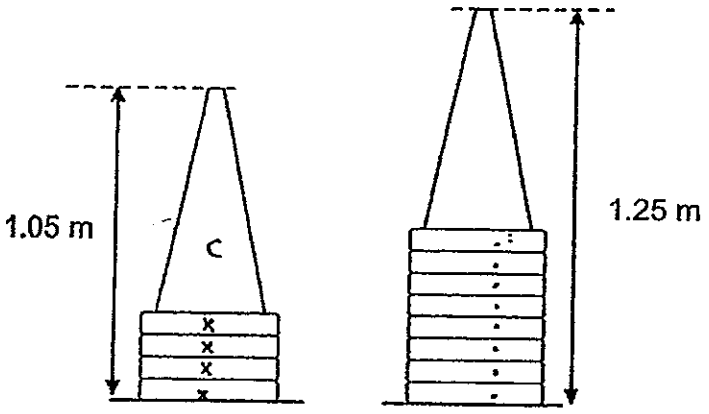
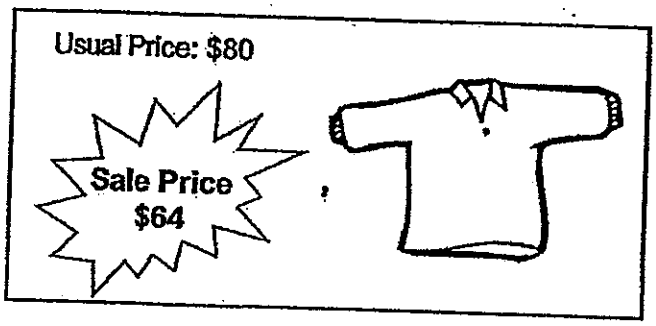


Figure A Figure B

Ans: _____ m

28. What is the percentage discount for the shirt shown?

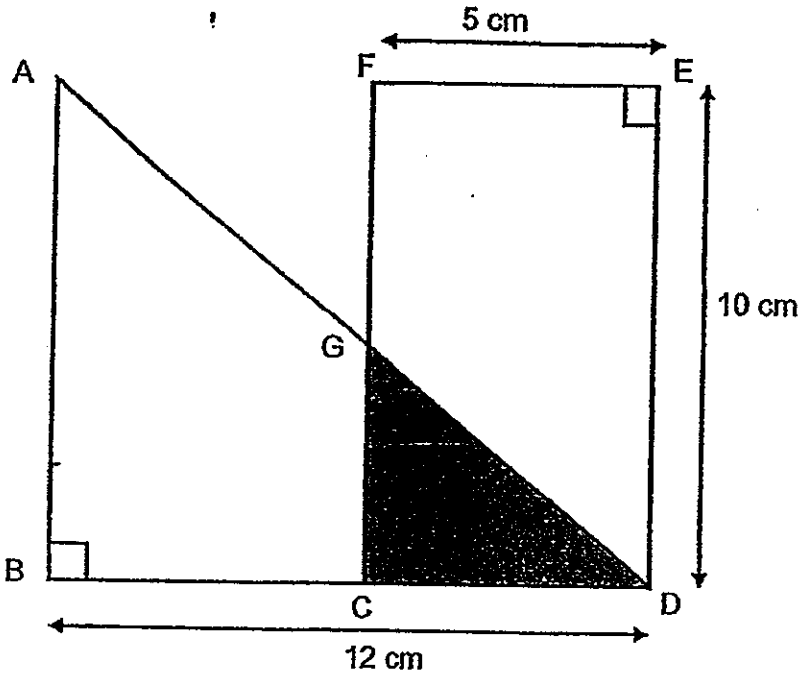


Ans: _____%

29. Caroline has some stickers. If she gives each of her cousins 8 stickers, she will not have any stickers left for herself. If she gives each of them 5 stickers, she will have 18 stickers left. How many stickers does Caroline have?

Ans: _____

30. The figure is made up of triangle ABD and rectangle FEDC which overlaps each other. AB = ED. The area of the shaded triangle GDC is 32 cm^2.
Find the area of the unshaded regions.



Ans: _____ cm^2

End of Paper
☺ Please check your work carefully ☺

RAFFLES GIRLS' PRIMARY SCHOOL
MID-YEAR EXAMINATION
PRIMARY 6

Name:_____( ) Form Class: P6_____

Date: 10 May 2022 Math Teacher: _____

MATHEMATICS

PAPER 2

Time: 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 an approved calculator is allowed.

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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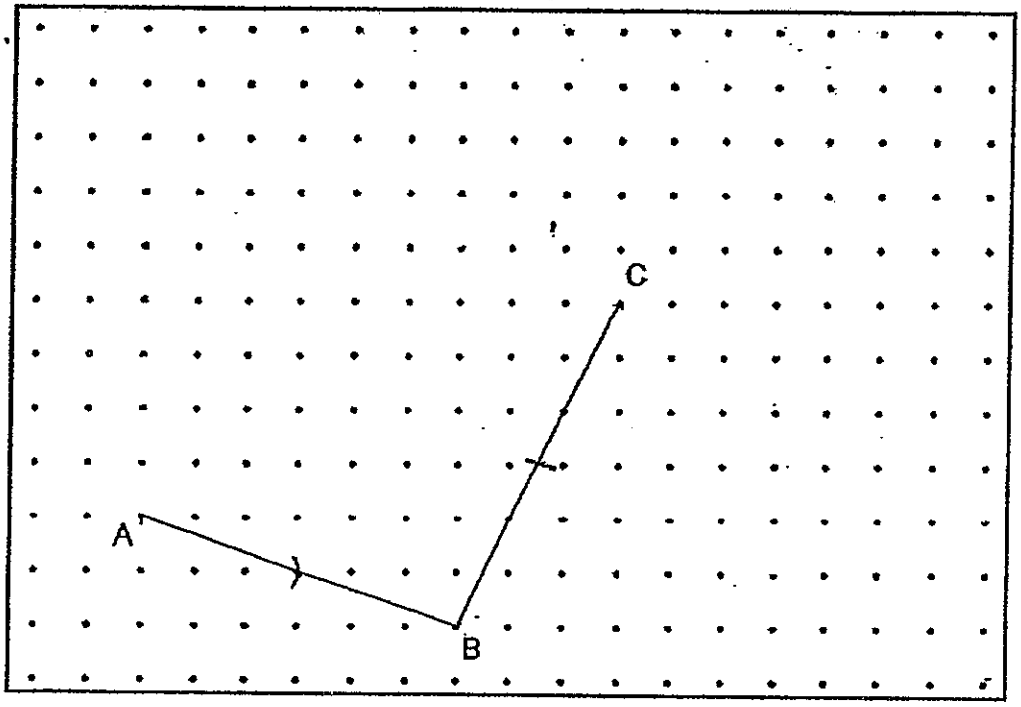
1. A flag pole is 2.1 m high. It is 5% higher than the tree beside it. What is the height of the tree in centimetres?

Ans : _____ m

2. 3 years ago, Ayden was 15 years old. This year, Serene's age is $\frac{4}{7}$ of their total age. Find the ratio of Serene's age to Ayden's age in 8 years' time. Give your answer in the simplest form.

Ans : _____

3. AB and BC are 2 straight lines drawn on a square grid inside a box.



By joining dots on the grid with straight lines within the box,

(a) draw trapezium ABCD such that AB is parallel to CD and AB is $\frac{2}{3}$ the length of CD. [1]

(b) draw another triangle BCE such that CB = CE and $\angle BCB = 90^{\circ}$. [1]

4. The average height of Jason, Kelly and Linda is 167 cm. Kelly and Linda have an average height of 162 cm. How tall is Jason?

Ans : _____ cm

5. At a concert, $\frac{1}{4}$ of the audience were children and the rest were adults. Each child received 2 light sticks while each adult received a light stick. During a break, some adults left the concert.

Each statement below is either true, false or not possible to tell from the information given. For each statement, put a tick (✓) in the correct column.

Statement	True	False	Impossible to tell
(a) The number of light sticks given to the adults were more than the number of light sticks given to the children.			
(b) There were more men than women at the concert at first.			
(c) After the break, the fraction of audience who were children decreased.			

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)

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6. Yan Ling paid \$5.50 for 1 kg of meat on Day 1. The price of the meat increased by 20% on Day 2. On Day 3, the price of the meat decreased to 75% of Day 2's price.

   (a) What was the price of the meat on Day 2?

   (b) How much did Yan Ling pay for 2.4 kg of meat on Day 3?

Ans : (a) _____ [1]

(b) _____ [2]

7. The first 19 numbers of a number pattern are as shown.

4, 0, 1, 0, 1, 4, 4, 0, 1, 0, 1, 4, 4, 0, 1, 0, 1, 4, 4,....

1st

(a) What is the 521st number?

(b) What is the sum of the first 521 numbers?

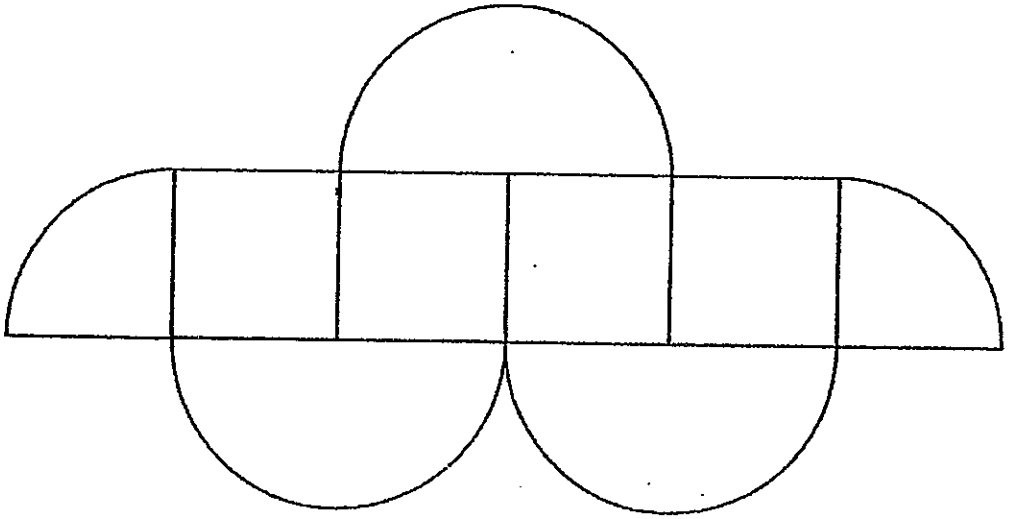
Ans : (a) _____ [1]

(b) _____ [2]

8. The figure shows a walking path at a botanical garden. It consists of 3 identical semicircles, 2 identical quarter circles and 4 identical squares. The area of one square is 625 m^2. Mr Min walked around the perimeter of the garden 4 times.

(a) What is the diameter of a semicircle?

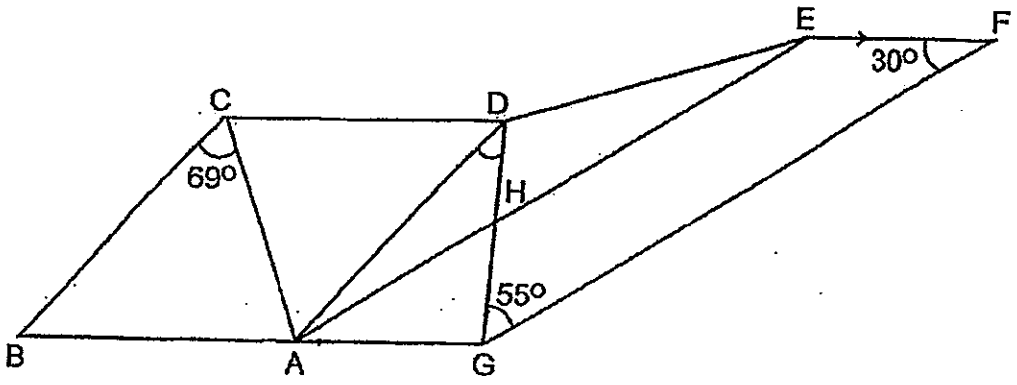
(b) Use the calculator value of π to find the total distance Mr Min walked.
Round your answer to 2 decimal places.



Ans : (a) _____ [1]

(b) _____ [3]

9. ABCD is a rhombus and AEFG is a parallelogram. BAG and DHG are straight lines. Find ∠ADG.



Ans : _____ [3]

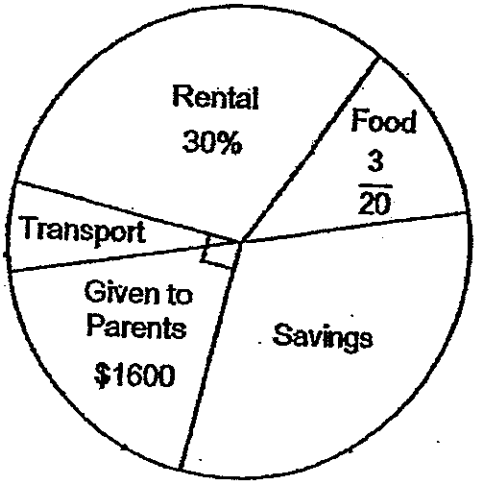
10. Mr Kang spent a total amount of $3087.50 on some potted plants for his garden. For every 4 big potted plants he bought, he bought 7 small potted plants. How many potted plants did Mr Kang buy altogether?

Big potted plant
$34

Small potted plant
$14.50

Ans : _____ [3]

11. The pie chart shows how Su-Lynn spends her monthly salary. Half of her monthly salary is spent on transport, rental and food.



(a) What percentage of Su-Lynn's monthly salary is spent on transport?

(b) How much does Su-Lynn save per month?

Ans : (a) _____ [1]

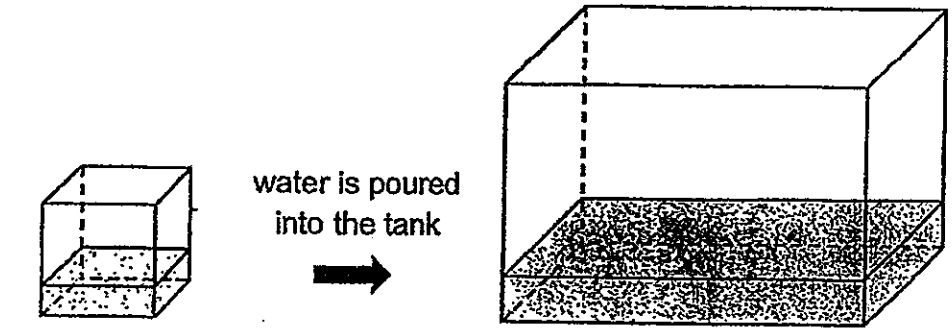
(b) _____ [2]

12. A cubic container was completely filled with water. When $\frac{3}{4}$ of the water from the container was poured into the rectangular tank, the tank was $\frac{1}{5}$ full.

The capacity of the tank was 4752 ml more than the capacity of the cubic container.

(a) What was the volume of the cubic container?

(b) What was the volume of the tank?



Ans : (a) _____ [3]

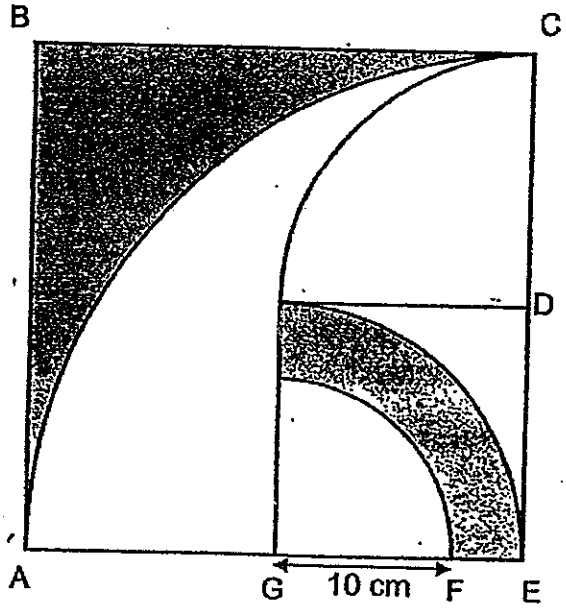
(b) _____ [1]

13. The figure shows one big quarter circle, two identical medium quarter circles and one small quarter circle. ABCE is a square of side 28 cm. AG = GE. The radius of the small quarter circle is 10 cm.

(a) What is the area of the big quarter circle ACE?

(b) What is the area of the shaded part?

Take $\pi = 3.14$.



Ans : (a) _____ [2]

(b) _____ [3]

14. There were 225 tokens in a box. The number of black, white and grey tokens were in the ratio of 4 : 6 : 5. A shopkeeper added another 81 tokens into the box. As a result, the number of black tokens increased by 20% and the number of white tokens increased by 30%.

(a) How many grey tokens were there in the box at first?

(b) Find the percentage increase in the number of grey tokens.

Ans : (a) _____ [1]

(b) _____ [3]

15. Norah arranged 11 candles in each row. She found another 17 candles and rearranged them such that there were 8 candles in each row. In the end, there were 13 more rows of candles than before. How many rows of candles were there at first?

Ans : _____ [3]

16. There were some blue and yellow beads in Box A and Box B. In Box A, the ratio of the number of blue beads to the number of yellow beads was 3 : 7. In Box B, the number of yellow beads was 55% of the number of blue beads.

After transferring half of the yellow beads from Box A to Box B, there were 546 beads in Box A. The ratio of the number of blue beads to the number of yellow beads in Box B after the transfer became 5 : 8.

(a) How many yellow beads were transferred from Box A to Box B?

(b) What was the number of blue beads in Box B?

Ans : (a) _____ [3]

(b) _____ [2]

17. Ellie baked some cookies. She gave $\frac{7}{10}$ of them to her relatives and 58 of them to her friends. She was left with $\frac{1}{5}$ of the cookies. She packed these into 15 boxes. Some boxes contained 4 cookies while the rest contained 12.

(a) How many cookies were packed into 15 boxes?

(b) How many boxes contained 4 cookies?

Ans : (a) _____ [3]

(b) _____ [2]

End of Paper

© Please check your work carefully ©

SCHOOL : RAFFLES GIRLS' PRIMARY SCHOOL
LEVEL : PRIMARY 6
SUBJECT : MATHEMATICS
TERM : 2022 SA1

PAPER 1 BOOKLET A

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

Q 11	Q12	Q13	Q14	Q15
3	2	1	3	4

PAPER 1 BOOKLET B

Q16)	$8 + (20 - 16 \div 2) \times 3$ $= 8 + 12 \times 3$ $= 8 + 36$ $= 44$
Q17)	$8 - 3 = 5$
Q18)	2.74, 2.704, 2.074
Q19)	Total $= 56 + 60 + 44 + 0$ $= 160$ Ave $= 160 \div 4$ $= 40$

Q20)	$1h + 1h + 1h + 15min = 3h\ 15min$
Q21)	$\frac{1}{2} x \frac{22}{7} x 14 x 14$ $= 308cm^2$
Q22)	$\frac{7}{9} \rightarrow 70 + 56 = 126$ $\frac{1}{9} \rightarrow 126 \div 7 = 18$ $\frac{2}{9} \rightarrow 18 x 2 = 36$
Q23)	$17 - 0.64 = 16.36$ $16.36 \div 8 = 2.045$ $2.045 \approx 2.0\ \ell$
Q24)	a) $\frac{2}{7} \div \frac{1}{9} = \frac{2}{7} x \frac{9}{1}$ $= \frac{18}{7}$ $= 2\frac{4}{7}$ b) used $= \frac{1}{9} x \frac{2}{1}$ $= \frac{2x7}{9x7} = \frac{14}{63}$ $= \frac{2x9}{7x9} = \frac{18}{63}$ $= \frac{18}{63} - \frac{14}{63}$ $= \frac{4}{63}$ Ans: a) 2 b) $\frac{4}{63}$

Q25)	$< DAC = 360° - 280° - 60°$ $= 20°$ $< BAC = 180° - 135° - 20°$ $= 25°$
Q26)	First $2h = 90$ $330 - 90 = 240$ $240 \div 40 = 6$ $6 + 2 = 8h$
Q27)	$C + 4X = 1.05$ $C + 8X = 1.25$ $4X = 0.20$ $C = 0.85$ $16X = 0.80$ $0.8 + 0.85 = 1.65$ m
Q28)	Discount $= 80 - 64 = 16$ $\frac{16 \div 4}{80 \div 4} = \frac{4}{20}$ $\frac{4 \times 5}{20 \times 5} \times 100\% = 20\%$
Q29)	$8s = 5s + 18$ $3s = 18$ $S = 6$ $6 \times 8 = 48$
Q30)	Area of big triangle $= \frac{1}{2} \times 10 \times 12$ $= 60$ $= 60 - 32 = 28$ Area of rectangle $= 5 \times 10 = 50$ $= 50 - 32 = 18$ Unshaded $= 18 + 28 = 46cm^2$

PAPER 2

Q1)

$105\% = 2.1$

$1\% = 0.02$

$100\% = 0.02 \times 100$

$= 2$

$2\text{m} = 200\text{cm}$

Q2)

$15 + 3 = 18$

$3u = 18$

$1u = 18 \div 3 = 6$

Serene $= 4 \times 6 + 8$

$= 32$

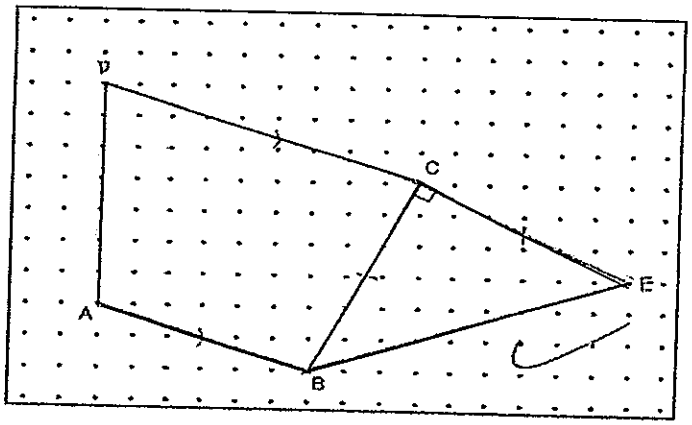
Ayden $= 6 \times 3 + 8$

$= 26$

Ans: 16 : 13

S : A
32 : 26
16 : 13

Q3)



Q4)

$J + K + L = 167 \times 3$

$= 501$

$K + L = 162 \times 2$

$= 324$

$J = 501 - 324 = 177\text{cm}$

Q5)

√		
		√
	√	

Q6)

$100\%\ of\ Day\ 1 = 5.5$

$1\%\ of\ Day\ 1 = 0.055$

$120\%\ of\ Day\ 1 = 0.055 \times 120$

$= 6.6$

$100\%\ of\ Day\ 2 = 6.6$

$1\%\ of\ Day\ 2 = 0.066$

$75\%\ of\ Day\ 2 = 0.066 \times 75$

$= 4.95$

1kg of meat = 4.95

2.4kg of meat = 4.95×2.4

$= 11.88$

Ans: (a) $6.60

(b) $11.88

Q7)

a) $521 \div 6 = 86$ R5

b) $4 + 1 + 1 + 4 = 10$ (one set)

$86 \times 10 = 860$

$860 + 4 + 1 + 1 = 866$

Ans: a) 1

b) 866

Q8)

a) $625 = 25 \times 25$

$25 + 25 = 50$m

b) Arc length of circle = $2 \times \pi \times 50$

$= 314.16$ (correct to 2.d.p.)

	Peri $= 314.16 + 25 \times 4$ $= 414.16$ Total distance $= 414.16 \times 4$ $= 1656.64$ m
Q9)	$< AGD = 180° - 30° - 55°$ $= 95°$ $< CBA = 180° - 69° - 69°$ $= 42°$ $< DAB = 180° - 42°$ $= 138°$ $< ADG = 138° - 95°$ $= 43°$
Q10)	1 set $= 34 \times 4 + 7 \times 14.5$ $= 237.5$ No. of sets $= 3087.5 \div 237.5$ $= 13$ Big $= 13 \times 4$ $= 52$ Small $= 13 \times 7$ $= 91$ Total $= 52 + 91$ $= 143$
Q11)	a) $\frac{10}{20} - \frac{9}{20} = \frac{1}{20}$ $\frac{1}{20} \times 100\% = 5\%$ b) $\frac{4}{20}$ of money $= 1600$

	$\frac{1}{20}$ of money $= 1600 \div 4$ $= 400$ Saved $= 400 \times 6 = \$2400$
Q12)	a) $11u = 4752$ $1u = 4752 \div 11$ $= 432$ vol. of container $= 432 \times 4$ $= 1728\ cm^3$ b) vol. of tank $= 432 \times 15$ $= 6480\ cm^3$
Q13)	a) $\frac{1}{4} \times 3.14 \times 28 \times 28$ $= 615.44 cm^2$ b) Area of $\square = 28 \times 28$ $= 784$ Area of 1st shaded part $= 784 - 615.44$ $= 168.56$ Area of medium $= \frac{1}{4} \times 3.14 \times 14 \times 14$ $= 153.86$ Area of small $= \frac{1}{4} \times 3.14 \times 10 \times 10$ $= 78.5$ Area of 2nd shaded part $= 153.86 - 78.5$ $= 75.36$ Shaded $= 168.56 + 75.36$ $= 243.92\ cm^2$

Q14)	a) $15u = 225$ $1u = 225 \div 15$ $= 15$ Grey at first $= 15 \times 5$ $= 75$ b) $2.6u = 15 \times 2.6$ $= 39$ Grey increase $= 81 - 39$ $= 42$ $\frac{42}{75} \times 100\% = 56\%$
Q15)	$11u + 17 = 8u + 104$ $3u = 87$ $1u = 87 \div 3$ $= 29$
Q16)	a) $6.5u = 546$ $1u = 546 \div 6.5$ $= 84$ $3.5u = 84 \times 3.5$ $= 294$ b) $21p = 294$ $1p = 294 \div 21$ $= 14$ $20p = 14 \times 20$ $= 280$
Q17)	a) $\frac{6}{20} - \frac{4}{20} = \frac{2}{20}$ $\frac{2}{20} = 58$ $\frac{1}{20} = 29$ $\frac{4}{20} = 29 \times 4$ $= 116$

	b) $15 \times 12 = 180$ $180 - 116 = 64$ $12 - 4 = 8$ $64 \div 8 = 8$

END