HENRY PARK PRIMARY SCHOOL
2015 PRELIMINARY EXAMINATION
MATHEMATICS
PRIMARY 6

PAPER 1
(BOOKLET A)

Name: _____ ( ) Parent's Signature

Class: Primary 6 _____ _____

Marks:

Paper 1	Booklet A	20
	Booklet B	20
Paper 2		60
Total		100

Total Time for Booklets A and B: 50 min

Do not turn over this page until you are told to do so.
Follow all instructions carefully.
Answer all questions.
Shade your answers in the Optical Answer Sheet (OAS) provided.
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 of the questions, four options are given. One of them is the correct answer. Choose the correct answer (1, 2, 3 or 4). Shade the correct oval on the Optical Answer Sheet provided.

(20 marks)

1. In 84.569, what does the digit 5 stand for?

   (1) 5 tens

   (2) 5 ones

   (3) 5 tenths

   (4) 5 hundredths

2. $6 \times (5 + 3) \div 3 =$ _____

   (1) 11

   (2) 16

   (3) 31

   (4) 36

3. Which of the following is the same as 8 070 ml?

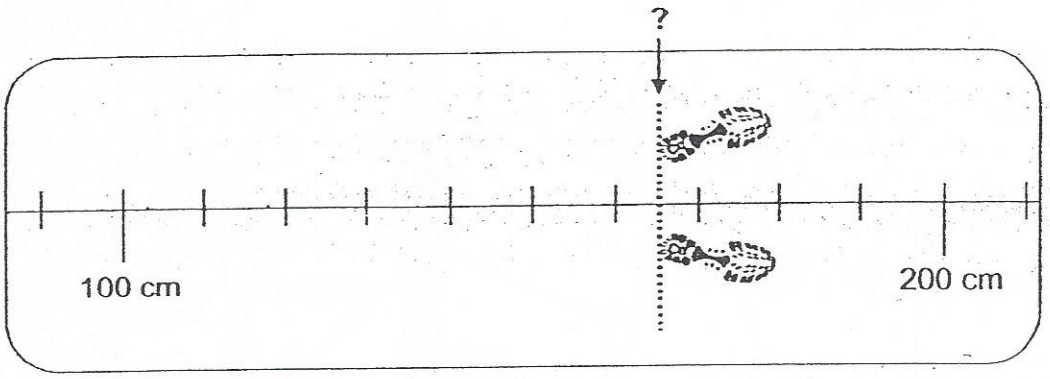
   (1) 8 ℓ 7 ml

   (2) 8 ℓ 70 ml

   (3) 80 ℓ 7 ml

   (4) 80 ℓ 70 ml

4. David did his standing broad jump and achieved the distance shown below. Which one of the following readings is closest to what he achieved?



(1) 1.06 m

(2) 1.56 m

(3) 1.66 m

(4) 1.76 m

5. The total length of stick A and stick B is 9 m. Together with stick C, the average length of the three sticks is 6 m. What is the length of stick C?

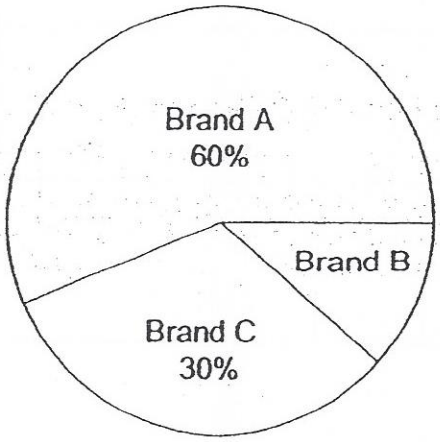
(1) 3 m

(2) 9 m

(3) 12 m

(4) 15 m

6. The pie chart below shows how Gary spent his money on different brands of shoes.



He spent $15 more on Brand C shoes than on Brand B shoes. How much did he spend on Brand A shoes?

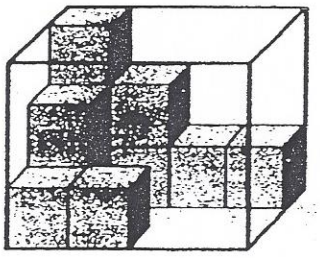
(1) $30

(2) $45

(3) $60

(4) $90

7. The figure below shows a transparent rectangular container partially filled with unit cubes. How many cubes can the container hold altogether?



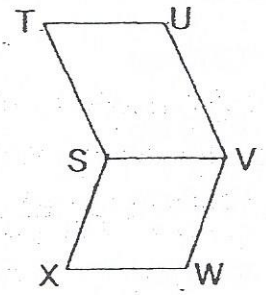
(1) 11

(2) 25

(3) 36

(4) 45

8. In the figure below, STUV is a parallelogram and VWXS is a rhombus. Which of the following pairs of lines are parallel?



(1) VW and UV

(2) VW and TS

(3) TU and XW

(4) TU and SX

9. Sarah has some mystery and comic books. The number of mystery books is $\frac{2}{3}$ the number of comic books. What is the ratio of the number of mystery books to the total number of books she has?

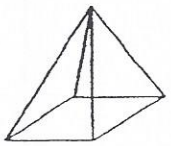
(1) 2 : 3

(2) 2 : 5

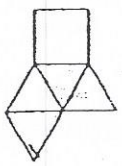
(3) 3 : 2

(4) 3 : 5

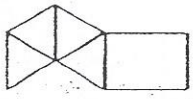
10. The figure below shows a square pyramid.



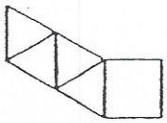
Which one of the following is the net of the square pyramid?



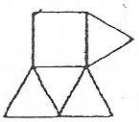
(1)



(2)



(3)



(4)

11. Kevin cut a ribbon measuring 274 6 m into 20 equal pieces. What is the length of each piece of ribbon? Give your answer in centimetres.

(1) 1.373 cm

(2) 13.73 cm

(3) 137.3 cm

(4) 1373 cm

12. Peter is n years old now. His sister is 3 times as old as he.
What will their total age be in 5 years' time?

(1) $4n$ years

(2) $(4n - 5)$ years

(3) $(4n + 5)$ years

(4) $(4n + 10)$ years

13. The table below shows Jose's salary each year from 2011 to 2015.

Date	Salary ($)
2011	2000
2012	2124
2013	2226
2014	2318
2015	2409

During which one-year period was the increase in Jose's salary the least?

(1) Between 2011 and 2012

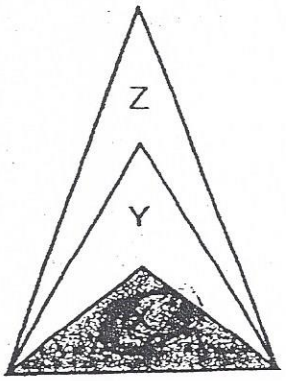
(2) Between 2012 and 2013

(3) Between 2013 and 2014

(4) Between 2014 and 2015

14. The figure below, not drawn to scale, shows 3 triangles X, Y and Z overlapping one another. The area of triangle X is $\frac{1}{3}$ the area of triangle Y and the area of triangle Y is $\frac{2}{3}$ the area of triangle Z.

Express the unshaded area of triangle Y as a fraction of the unshaded area of triangle Z.



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

(2) $\frac{2}{7}$

(3) $\frac{4}{9}$

(4) $\frac{4}{7}$

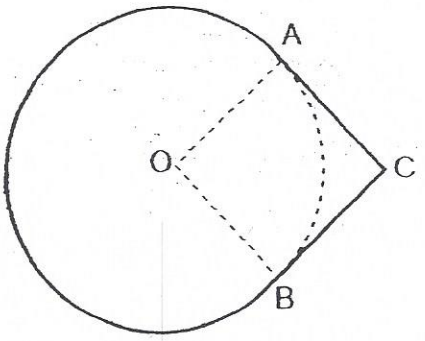
15. The figure below is formed by a square AOBC and a circle with centre O. AOB is part of the circle. The length of AO is 7 cm. Find the perimeter of the figure. (Take $\pi = \frac{22}{7}$)

(1) 33 cm

(2) 40 cm

(3) 47 cm

(4) 58 cm



(Go on to Booklet B)

HENRY PARK PRIMARY SCHOOL
2015 PRELIMINARY EXAMINATION
MATHEMATICS
PRIMARY 6

PAPER 1
(BOOKLET B)

Name: _____ ( )

Class: Primary 6_____

/20

Total Time for Booklets A and B: 50 min

Do not turn over this page until you are told to do so.

Follow all instructions carefully.

Answer all questions.

Write your answers in this booklet.

You are **not** allowed to use a calculator.

Booklet B:
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.

(10 marks)

---

16. Arrange the following fractions in descending order.

$$\frac{3}{4}, \frac{2}{5}, \frac{5}{8}$$

Do not write in this space

17. Isabelle ate $\frac{1}{6}$ of a pie. She cut the remainder into 4 equal slices. What fraction of the pie was each slice?

Ans: _____

18. The opening hours of a clinic is shown below. How long is the clinic open on Saturday?

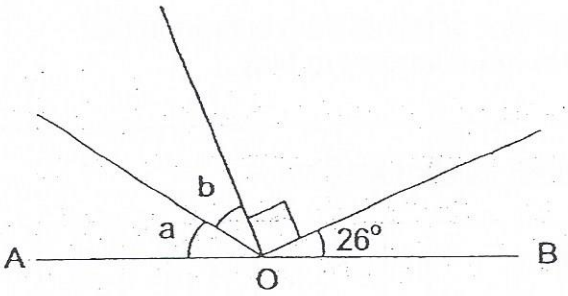
Consultation Hours:
Mon to Fri: 8.30 am – 12.30 pm
2.00 pm – 4.30 pm
6.00 pm – 11.00 pm

Sat: 8.30 am – 12.30 pm
6.00 pm – 11.00 pm

Sun/Public holidays: Closed

Ans: _____

19. AOB is a straight line as shown in the figure. $\angle a = \angle b$ Find $\angle a$.



Ans: _____

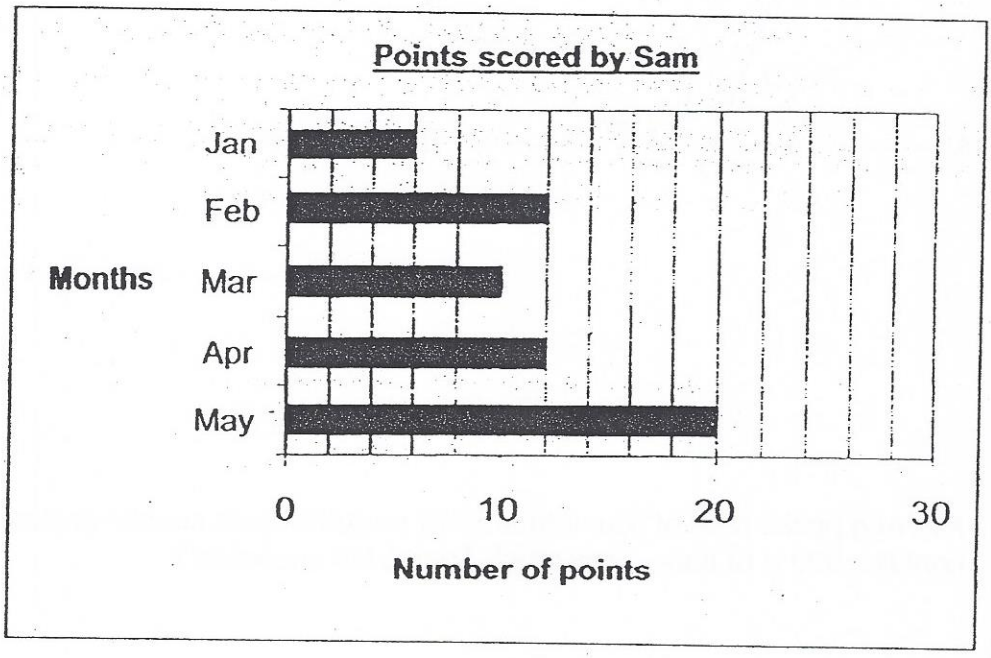
20. Mrs Ang packs 6 kg of flour into smaller packets. Each smaller packet contains 900 g of flour. How much flour is left unpacked?

Ans: _____ g

Do not write in this space

Use the information below to answer questions 21 and 22.

The graph below shows the number of points Sam scored in the basketball matches he played in from January to May.



21. How many months did Sam score at least 10 points?

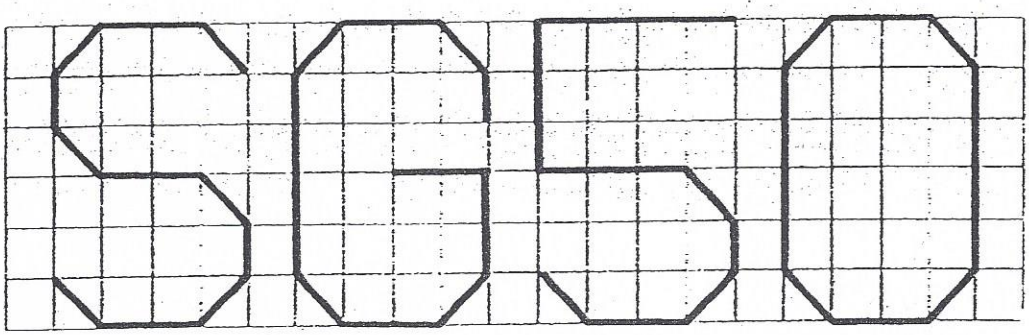
Ans: _____

22. What is the average number of points Sam scored per month from January to May?

Ans _____

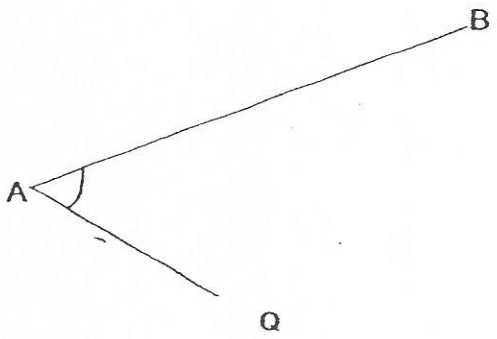
23. In the diagram below, the letters S and G and digits 5 and 0 are drawn on a square grid. List **all** the letters and/ or digits which have at least one line of symmetry.

Do not write in this space



Ans: _____

24. The figure below shows a line AB. Draw a line AQ such that AQ is 3 cm and $\angle BAQ$ is 50°.



25. After receiving a discount of 20%, Mrs Tan paid $56 for a watch. What was the price of the watch before the discount?

Do not write in this space

Ans: $ _____

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 spaces provided. For questions which require units, give your answers in the units stated.

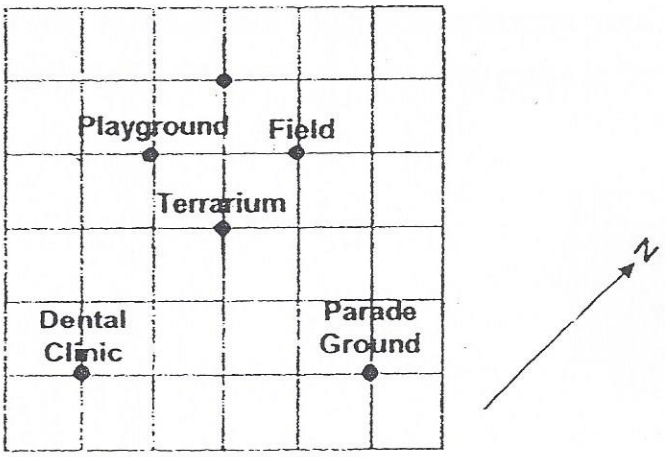
(10 marks)

Do not write in this space

26. In a stall, sweets are only sold in packets of 8. Each packet is sold at $4. One sweet is given free for every two packets bought. What is the maximum number of sweets that can be obtained with $20?

Ans: _____

27.



Refer to the square grid above and fill in the blanks with the correct location.

(a) The terrarium is east of the _____

(b) The _____ is northwest of the terrarium.

Ans: (a) _____

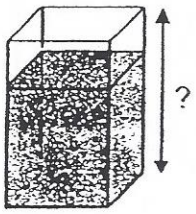
(b) _____

28. Peter had $\frac{3}{8}$ as many marbles as Simon. After Simon misplaced $\frac{3}{4}$ of his marbles, Peter had 120 more marbles than Simon. How many marbles did Peter have?

Do not write in this space

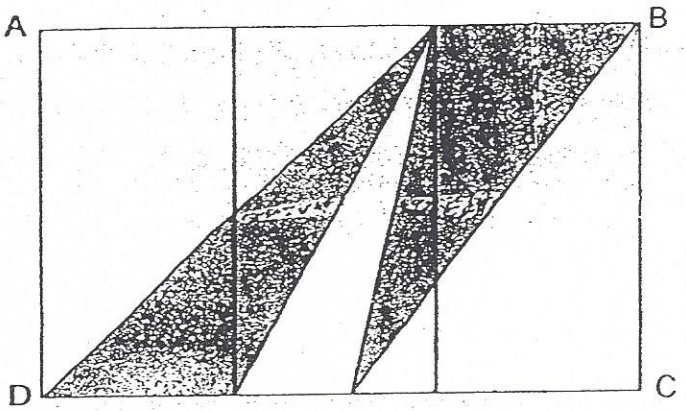
Ans: _____

29. The base area of a rectangular tank is 20 m^2. The tank contains 120 m^3 of water when it is $\frac{3}{4}$ filled. What is the height of the tank?



Ans: _____ m

30. The figure ABCD below is made up of 3 identical rectangles. What is the ratio of the area of the shaded parts to the area of the unshaded part? Give your answer in the simplest form.



Do not write in this space

Ans: _____

End of Paper

HENRY PARK PRIMARY SCHOOL
2015 PRELIMINARY EXAMINATION
MATHEMATICS
PRIMARY 6

PAPER 2

Name: _____ ( )

Class: Primary 6 _____

60

Time for Paper 2: 1 h 40 min

Do not turn over this page until you are told to do so.

Follow all instructions carefully.

Answer all questions.

Show your working clearly as marks are awarded for correct working.

Write your answers in this booklet.

You are allowed to use a calculator.

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 space provided. For questions which require units, give your answers in the units stated.

(10 marks)

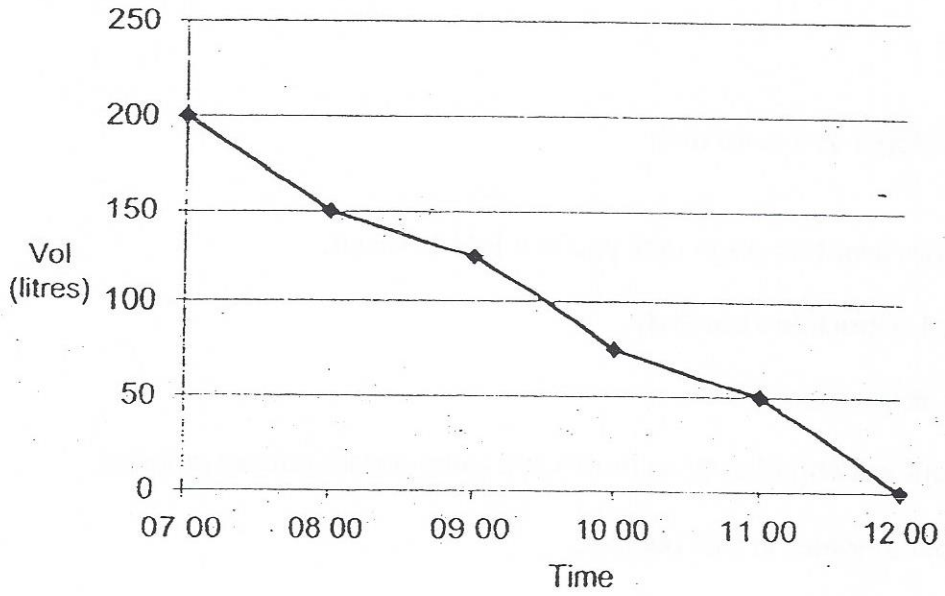
---

1. Junfang took 5 minutes in total to fold 2 identical paper cranes and a paper boat. She took 30 seconds less to fold a boat than a crane and spent the same amount of time folding each crane. How many seconds did she take to fold the paper boat?

Do not write in this space

Ans: _____ s

2. A 200-litre tank was completely filled with water at 07 00. Water flowed out of the tank until it was completely empty at 12 00. The line graph below shows the rate of the flow of water. At what time was the tank 25% filled with water?



Ans:

3. A third of Gabriel's mass is thrice that of Helen's mass. Express Helen's mass as a fraction of their total mass.

Do not write in this space

Ans: _____

4. A large bottle of oil was poured equally into 75 small bottles. Oil from 15 of these small bottles was then redistributed into the remaining small bottles. As a result, each of the remaining small bottles received 10 ml more oil. How much oil was there in the large bottle at first?

Ans: _____ ml

5. The table below shows the number of hours each student in a class of 30 students spent playing computer games per week.

Number of hours each student spent playing computer games per week	4	5	?
Number of students	10	15	5

The average number of hours the students spent playing computer games per week was 5 hours. What is the missing number in the table?

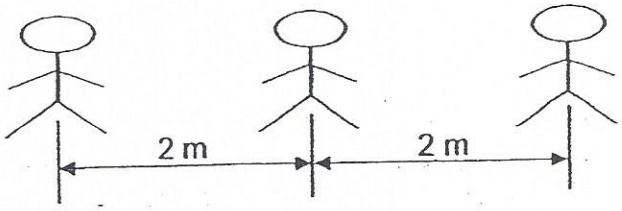
Ans: _____

Do not write in this space

For questions 6 to 18, 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. (50 marks)

---

6. 40 students lined up in a row along the corridor with an equal spacing of 2 m apart to welcome the Guest-of-Honour (GOH) at a school event. The GOH then walked along the row to shake each student's hand.



a) Starting from the first student, how far would the GOH have walked when he shook the 10^{th} student's hand?

b) When the GOH had walked a total of 58 m, how many students' hands would he have shaken?

Ans: a) _____ [1]

b) _____ [2]

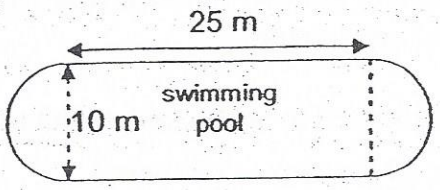
Do not write in this space

7. James used $\frac{4}{7}$ of his screws and $\frac{3}{5}$ of his nails to construct a wooden cupboard. In the end, he had an equal number of screws and nails left. Given that James had a total of 145 screws and nails at first, how many nails did he use to construct the wooden cupboard?

Do not write in this space

Ans: _____ [3]

8. A swimming pool takes the shape of 2 semi-circles and a rectangle shown below. Andy walked 15 rounds along the perimeter of the swimming pool. What was the total distance Andy walked?
Give your answer in kilometres. (Take $\pi = 3.14$)



Do not write in this space

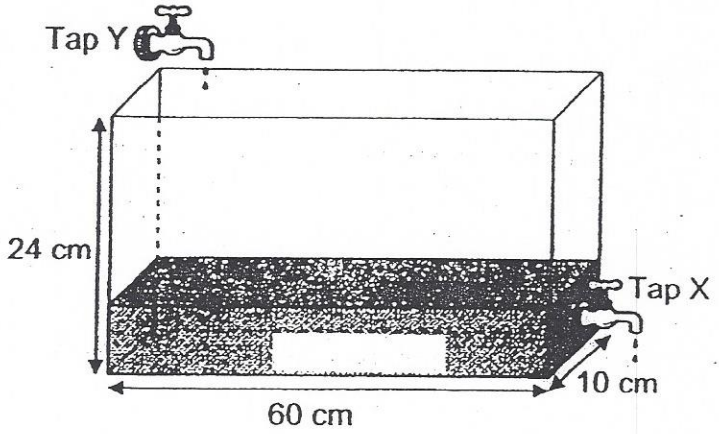
Ans: _____ [3]

9. A tank measuring 60 cm by 10 cm by 24 cm is $\frac{1}{4}$ filled with water.

Taps X and Y were turned on at the same time. Water was drained out from Tap X at the rate of 750 cm^3 per minute while water flowed in from Tap Y at the rate of 1050 cm^3 per minute.

(a) How much more water is needed to fill the tank to the brim?

(b) How long would it take to fill the tank to the brim?



Do not write in this space

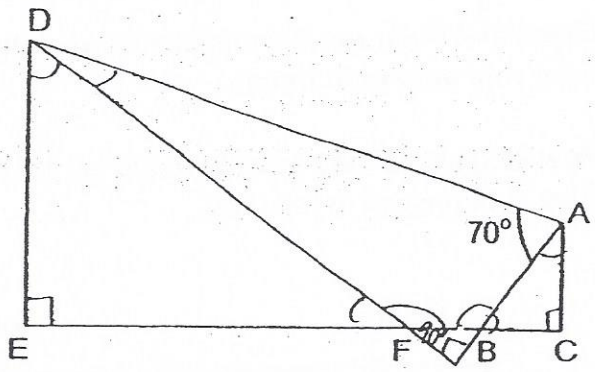
Ans: (a) _____ [1]

(b) _____ [3]

10. In the figure below, a rectangular piece of paper is folded along AD as shown. Given that EFBC is a straight line, find

(a) $\angle$ EDF.

(b) $\angle$ DFC.



Do not write in this space

Ans: a) _____ [2]

b) _____ [1]

11. Peter and John started running in opposite directions from a same spot. After 36 minutes, the distance between the 2 boys was 7920 m.

Do not write in this space

a) Given that Peter ran 3 times as fast as John, find Peter's speed. Give your answer in m/min.

b) How long would they have to run to be 12 760 m apart? Give your answer in minutes.

Ans: a) _____ [2]

b) _____ [2]

12. The ratio of the number of marbles May, Teddy and Sam had was 3 : 5 : 2. During a game, May lost half of her marbles to Teddy. Teddy lost 20 marbles to Sam who then had 3 times the number of marbles May had at the end of the game.

a) What was the percentage increase in the number of marbles Sam had at the end of the game?

b) How many marbles did Teddy have at the end of the game?

Do not write in this space

Ans: a) _____ [2]

b) _____ [2]

13. The table below shows the prices of admission tickets to a zoo.

Types of ticket	Price ($)
Child (3 – 12 years old)	$3y$
Adult	35
Senior Citizen (60 years & above)	$2y$

a) Mr and Mrs Chan took their 70-year old mother and 12-year old twins to the zoo. How much did they pay for the admission tickets in total? Give your answer in terms of y.

b) Mr Chan gave the cashier $150. If $y = 7$, how much change would he receive?

Ans: a) _____ [1]

b) _____ [2]

Do not write in this space

14. The table below shows the method used to compute the sum of different sets of consecutive numbers.

Do not write in this space

Sum of numbers from 1 to 10	1 + 2 + 3 + ... + 8 + 9 + 10 = (10 x 11) ÷ 2 = 55
Sum of numbers from 1 to 20	1 + 2 + 3 + ... + 18 + 19 + 20 = (20 x 21) ÷ 2 = 210
Sum of numbers from 1 to 30	1 + 2 + 3 + ... + 28 + 29 + 30 = (30 x 31) ÷ 2 = 465
Sum of numbers from 1 to 40	? (a)

a) Find the sum of numbers from 1 to 40.

b) The multiples of 7 and the multiples of 9 were excluded from the set of numbers 1 to 40. Find the sum of the remaining numbers in this set.

Ans: a) _____ [1]

b) _____ [3]

15. A bag contained some yellow, red and blue marbles. There were 221 more yellow marbles than blue marbles. There were $\frac{3}{4}$ as many red marbles as blue marbles. Given that the number of blue marbles was $\frac{1}{6}$ of the total number of marbles, how many marbles were there altogether?

Do not write in this space

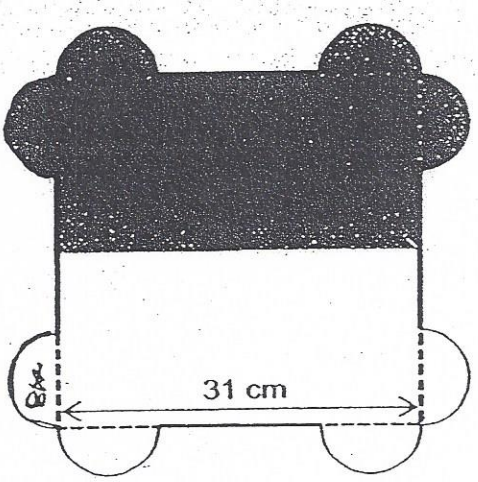
Ans: _____ [5]

16. The table mat below is made up of identical semi-circles and a 31-cm square.

a) Find the perimeter of the entire table mat.

b) Half of the table mat is shaded. Find the area of the shaded part.

(Take $\pi = \frac{22}{7}$)

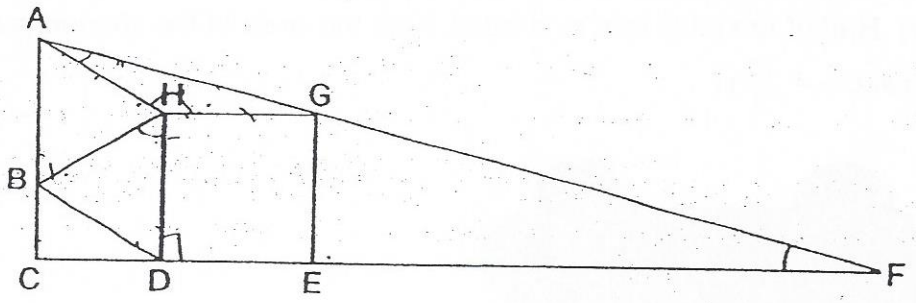


Do not write in this space

Ans: a) _____ [2]

b) _____ [3]

17. In the diagram below, ACF is a right-angled triangle, DEGH is a square and ABDH is a rhombus. Given that AB = BH, find $\angle$ AFC.



Do not write in this space

Ans: _____ [4]

18. At a fun-raising event, 60% of the people were male and the rest were female. 20% of the female left the event in the afternoon.
In the evening, after 33 male and 35 female left the event, 75% of the people at the event were male.

a) What percentage of the people left the event in the afternoon?

b) How many people were there at the start of the fun raising event?

Do not write in this space

Ans: a) _____ [2]

b) _____ [3]

END OF PAPER-

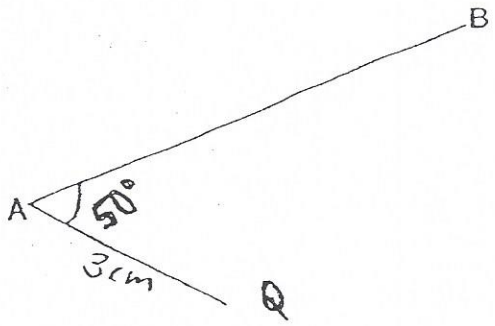
Setters: Mr Bernard Li, Ms Chin Lian Mei, Mrs Josephine Lai, Mr Yip Yew Fei, Ms Yew Hew Mei

EXAM PAPER 2015
LEVEL : PRIMARY 6
SCHOOL : HENRY PARK PRIMARY SCHOOL
SUBJECT : MATHS
TERM : PRELIMINARY EXAMINATION

PAPER ONE

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

Q16. $\frac{3}{4}, \frac{5}{8}, \frac{2}{5}$ Q17. $\frac{5}{24}$ → $1 - \frac{1}{6} = \frac{5}{6} \cdot \frac{5}{6} \div 4 = \frac{5}{6} \times \frac{1}{4} = \frac{24}{5} = \frac{5}{24}$
Q18. 9h → 4h + 5h = 9h Q19.32° → 64÷2 =32 Q20. 600G → 6000÷900 = 60 ÷9 =6r 6, 6 x100= 600
Q21. 4 MONTHS – 6 =12 =18, 18 + 10 = 28, 28 +12=40, 40 +20 = 60, 60 ÷5 =12.
Q22. 12 points Q23. Zero Q24 **SEE PICTURE**



Q25. $70 - → 100-20 =80, 56÷80 = 56 ÷8 = 10, 7 ÷10 = 0.7, 0.7 x 100=70
Q26. 42 → $8 = 16 + 1 = 17, 17 + 17 +8 = 42
Q27a. Playground Q27b. Park
Q28 360° - 120 x 3 = 360 Q 29. 8m → 120÷3= 40 , 40 x 4= 160, 100÷20=160÷2=10, 80÷10=8
Q30. 1:2→ 4 + 3, 7 :5, 5:7

PAPER TWO

Q1. 5 x 60 = 300, 300 + 30 = 330, 330 ÷3=110, 110-30=80
Q2. 100 → 200÷100=2, 2 x 25 =50. Q3. $\frac{1}{10}$ → 9u + 1u = 10u = $\frac{1}{10}$
Q4. 3000ml → 75 – 15 = 60, 60 X 10= 600, 600÷15 = 40, 40 x 75 = 3000
Q5. 7h → 4 x 10 = 40, , 5 X 15 =75, 5 X 30 = 150, 150 – 75 -40 = 35, 35 ÷5 = 7
Q6a. 18m Q6b. → 2m x 9 = 18m, 58÷2 = 29, 29 + 1 = 30
Q7 . 45 → 14u =15u = 29U, 145 ÷29 =5, 5 X 9U = 45
Q8. 1.221km→ 3.14 x 10 = 31.4, 31.4 +25+25=81.4, 81.4 x 15 = 1221.
Q9a. 10800ml Q9b 36 mins → 60 x 10 x 24 = 14,400, 1050 -750 = 300, The tank fills by – 300cm³ per min, 14400 ÷4 =3600, 14400 – 3600 = 108,00, 108,00cm³ = 10800ml, 10800 ÷ 300 = 36.
Q10a. 50° , Q10b. 140° - 180 – 70 – 70 = 40, 180 – 40 -90 = 50, 180 – 50 = 130, 180 – 90 – 70=20, 90 -20-20 = 50, 180 – 50 -90= 40, 180 – 40 = 140.
Q11a. 165m/min Q11b. 58 mins → 7920 ÷4 =1980, 1980 x 3 = 5940, 5940 ÷36=165, Peter runs 165/min, 1980 ÷36 = 55, John runs 55m/min, 165 + 55= 220, 12760 ÷220 = 58.
Q12a. 125% → 3u - $\frac{1}{2}$u = $2\frac{1}{2}$ u, $2\frac{1}{2}$u →20, 20÷5 = 4, $\frac{1}{2}$u →4, 1.5 u + 1.5u = 1.5u = $\frac{9}{2}$u, 4 x 9 = 36, 36 – 20=16, 16 ÷ 100 = 0.16, 20 ÷ 0.16 = 125.
Q13a. $8y +70 , Q13b. $24 → 3Y X 2 = 6Y (KIDS), 35 X 2 = 70 ADULTS, 2y + 3y +70 = 5y +70
7 x 5 = 35, 35 + 70 =105, 2y + 6y +70 = 8y +70, 8y =56, 56 +70=126, 150-126=24
Q14a. 820, Q14b. 625 → (40 x 41) ÷ 2 = 820, 7 +14+21+28+35=105, 9+18=27+36=90, 105+90=195,

820-195=625.

Q15. 408 → 4u x 6 = 24u, 24u – 11u = 13u, 13u →221, 1u →221 ÷13 = 17, 17 x 24 = 408

Q16a.156cm → 31 -= 17 = 14, 14÷2=7, $\frac{22}{7}$ X 7 = 22, 22 X 4 = 88, 88 + (17 X 4) =156

Q16b. 557.5cm² → 31 x 31 = 961, 961 ÷2 = 480.5, $\frac{22}{7}$ x 3.5 x 3.5 = 38.5, 38.5 x 2 = 77, 77 + 480.5 = 557.5

Q17. 15° - 360° - 60° - 60°-90°=150°, 180°-150°=30°, 30÷2=15, 60 + 15 = 75, 180-90-75=15

Q18.a. 8%, Q 18b. 200 → 40% ÷100=0.4%, 0.4% X 20 = 8%, 100% -75%=25%, 32% -25% =7%, 7%, 60U – 33 = 96U – 105, 96u -60u=105-33, 30u-72, 1u=72-36, 100u=2 x 100=200

Q12b – 32 → $6\frac{1}{2u} = \frac{13}{2}u$

→ 4x13 = 52

→ 52 – 20 = 32