NANYANG PRIMARY SCHOOL

PRELIMINARY EXAMINATION 2019

PRIMARY 6

MATHEMATICS PAPER 1 (BOOKLET A)

Total Duration for Booklets A and B: 1 hour

Additional materials: Optical Answer Sheet (OAS)

INSTRUCTIONS TO PUPILS

1. Do not turn over this page until you are told to do so.
2. Follow all instructions carefully.
3. Answer all questions.
4. Shade your answers in the Optical Answer Sheet (OAS) provided.
5. The use of calculators is **NOT** allowed.

Name: _____ ( )

Class: Primary 6 ( )

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) and shade your answer on the Optical Answer Sheet. (20 marks)

---

1 Round 895 547 to the nearest thousand.

(1) 895 000

(2) 895 500

(3) 896 000

(4) 900 000

2 2 tenths and 6 thousandths is _____.

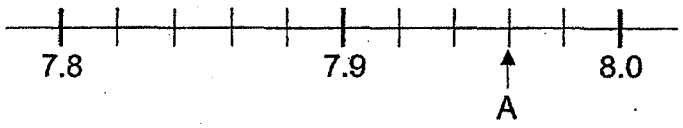
(1) 0.206

(2) 2.006

(3) 20.06

(4) 200.2

3 In the scale below, what is the value of A?



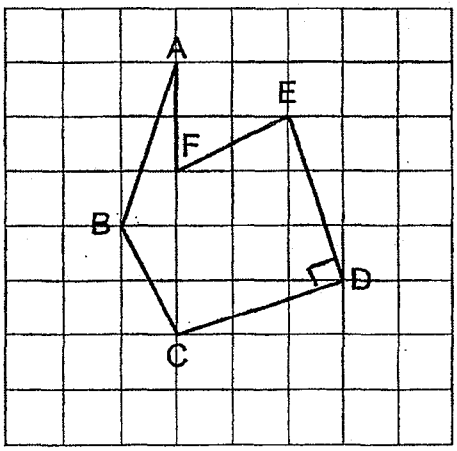
(1) 8.2

(2) 7.96

(3) 7.95

(4) 7.93

4 Which two lines in the square grid are perpendicular to each other?



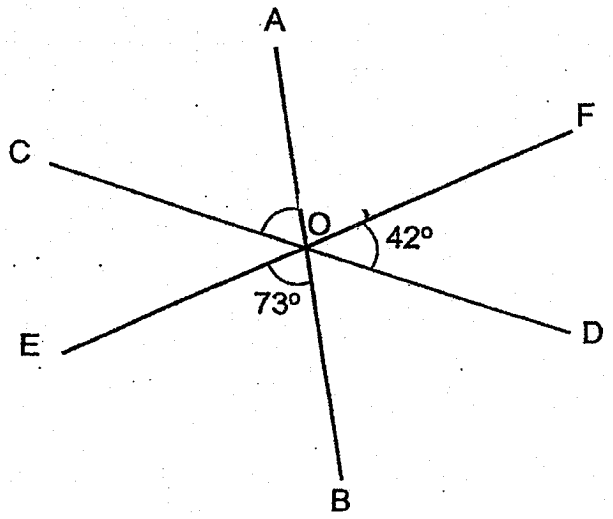
(1) AB and BC

(2) BC and CD

(3) CD and DE

(4) DE and EF

5 In the figure below, AOB, COD and EOF are straight lines. $\angle DOF = 42^\circ$ and $\angle BOE = 73^\circ$. Find $\angle AOC$.



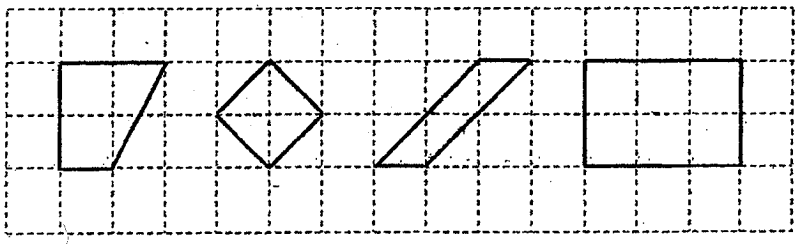
(1) 42°

(2) 65°

(3) 73°

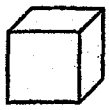
(4) 115°

6 In the square grid below, which shape is a trapezium?



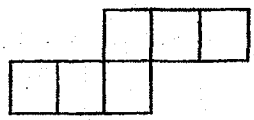
(1) (2) (3) (4)

7 The figure below shows a cube.

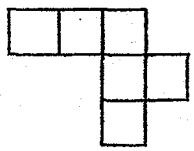


Which of the following is a net of the cube?

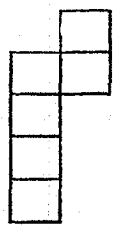
(1)



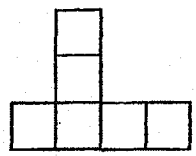
(2)



(3)



(4)



8 Find the value of r such that $4r - r = 24$.

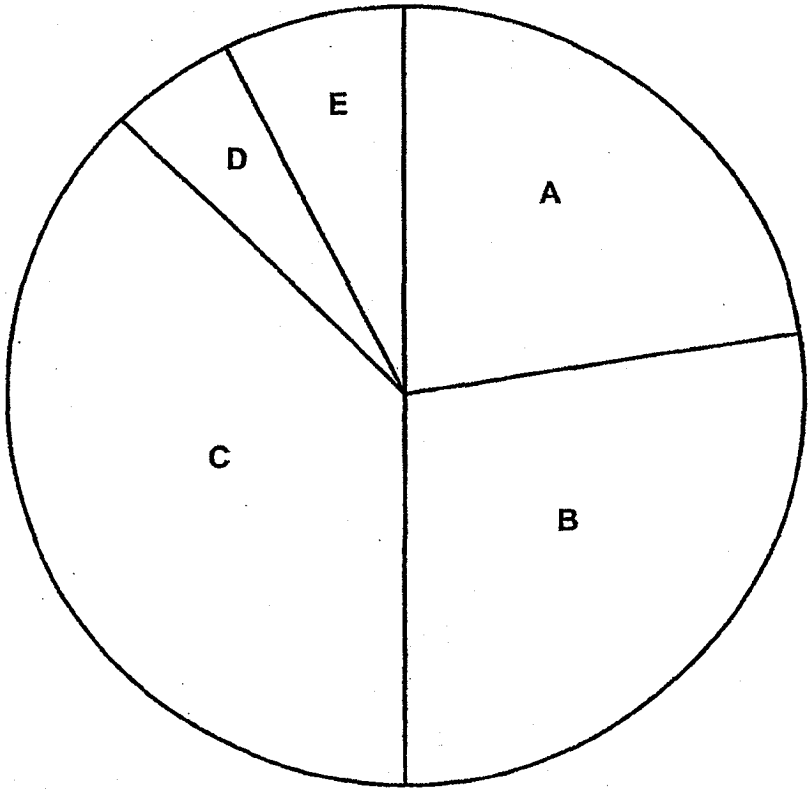
(1) 24

(2) 12

(3) 8

(4) 4

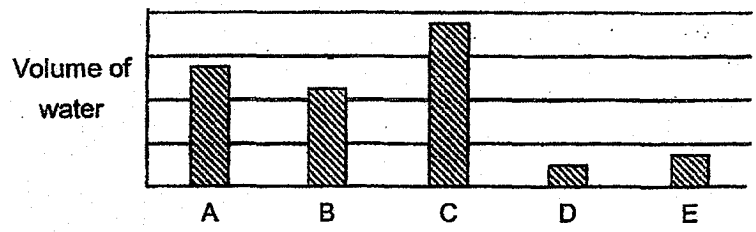
9 The pie chart below shows the volume of water in containers A, B, C, D and E.



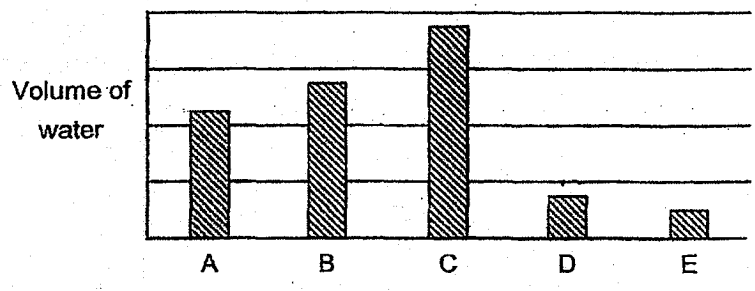
Refer to question and options on the next page.

Which bar graph best represents the information in the pie chart?

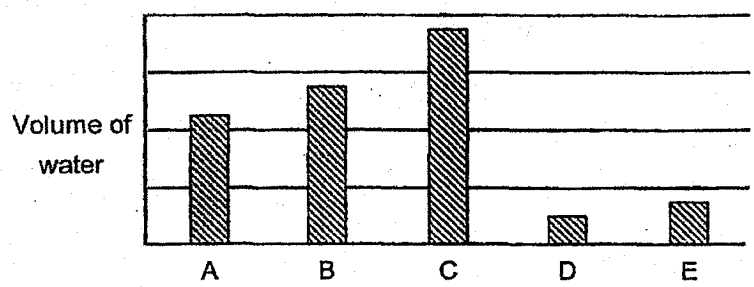
(1)



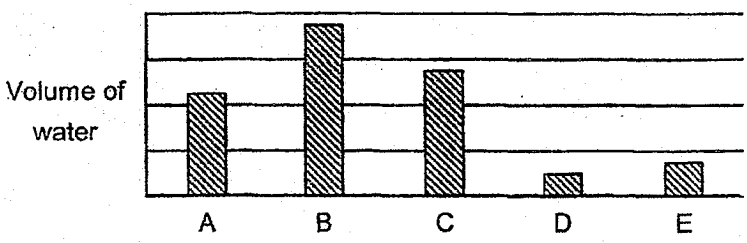
(2)



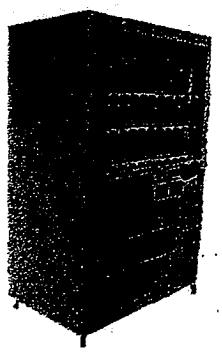
(3)



(4)



10 Which one of the following is likely to be the height of a vending machine in the school canteen?



(1) 20 m

(2) 2 m

(3) 20 cm

(4) 2 cm

11 Which one of the following fractions is nearest to 1?

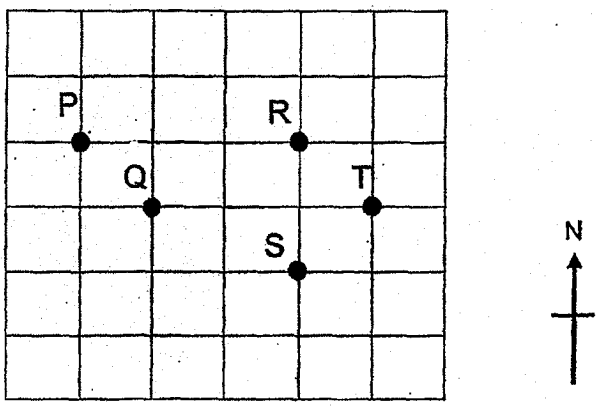
(1) $\frac{2}{3}$

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

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

(4) $\frac{6}{7}$

12 The square grid below shows the positions of points P, Q, R, S and T.



Which of the following statements is true?

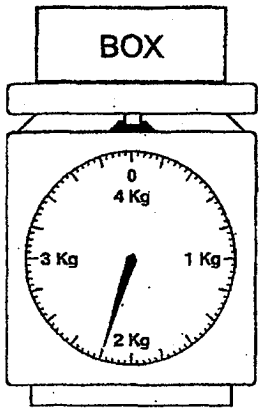
(1) Point S is north of Point R.

(2) Point T is west of Point Q.

(3) Point Q is south-east of Point P.

(4) Point P is north-west of Point S.

13 What is the reading shown on the weighing scale below?



(1) 2.01 kg

(2) 2.02 kg

(3) 2.1 kg

(4) 2.2 kg

14 The height of Ashley is $\frac{2}{3}$ of the height of Zheng Xin. The ratio of the height of Zheng Xin to that of Chloe is 4 : 5. Find the ratio of the height of Chloe to the total height of Zheng Xin and Ashley.

(1) 3 : 4

(2) 4 : 3

(3) 4 : 15

(4) 15: 4

15 The first 22 numbers of a number pattern are given below.

2, 2, 0, 1, 4, 2, 2, 2, 0, 1, 4, 2, 2, 2, 0, 1, 4, 2, 2, 2, 0, 1, ...
1st 22nd

Find the sum of the first 48 numbers in the number pattern.

(1) 85

(2) 86

(3) 87

(4) 88

NANYANG PRIMARY SCHOOL

PRELIMINARY EXAMINATION 2019

PRIMARY 6

MATHEMATICS PAPER 1 (BOOKLET B)

Total Duration for Booklets A and B: 1 hour

INSTRUCTIONS TO PUPILS

1. Do not turn over this page until you are told to do so.
2. Follow all instructions carefully.
3. Answer all questions.
4. Write your answers in this booklet.
5. The use of calculators is **NOT** allowed.

Name: _____ ( )

Class: Primary 6 ( )

Booklet B	/ 25

Any query on marks awarded should be raised by 2 September 2019. We seek your understanding in this matter as any delay in the confirmation of marks will lead to delays in the generation of results.

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. (5 marks)

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16 Amanda had 2 m of ribbon at first. She used 80 cm of the ribbon. What fraction of the ribbon did she use?

Ans: _____

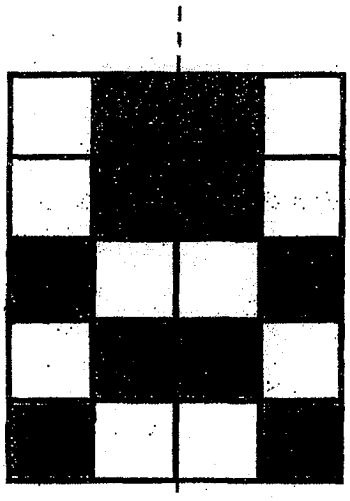
---

17 Express 6.04 kilograms in grams.

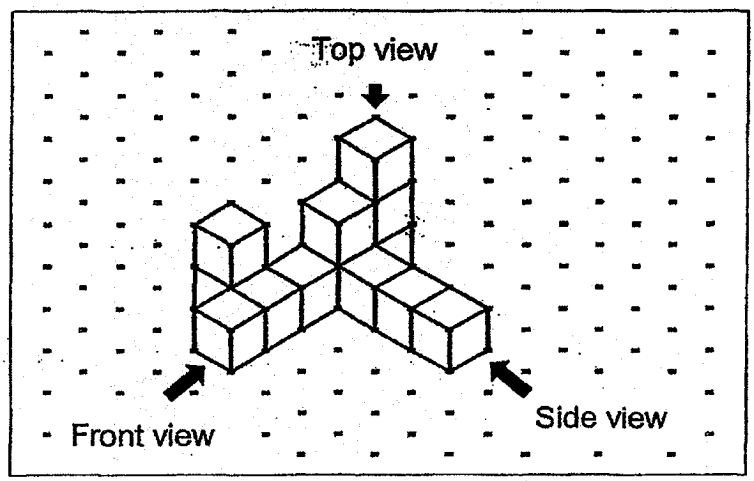
Ans: _____ g

---

18 The figure is made up of identical squares. Shade two more squares so that the figure has exactly one line of symmetry.

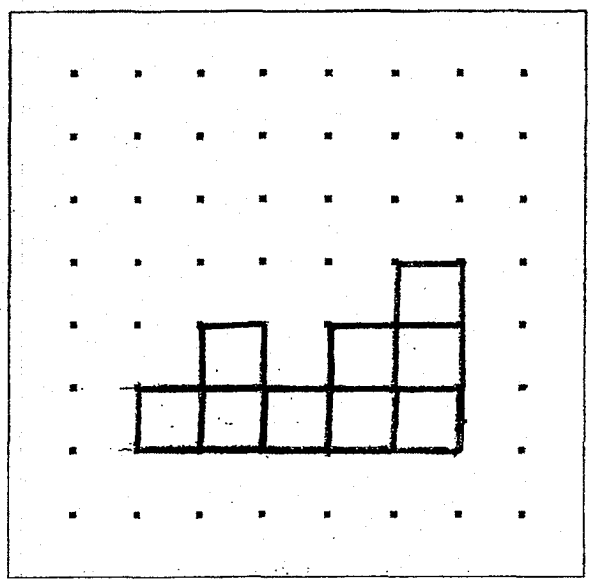


19 Johnson stacked 13 unit cubes and glued them together to form the solid below.

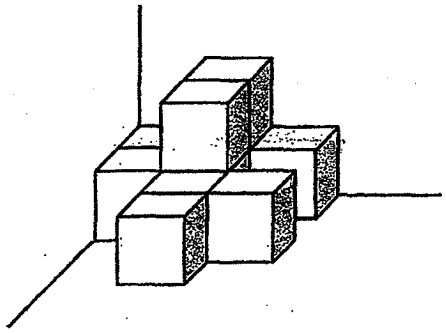


Draw the side view of the solid on the grid below.

Side View



20 The solid below is formed by unit cubes. How many unit cubes are there?



Ans: _____

Questions **21** to **30** carry 2 marks each. Show your working clearly and write your answers in the spaces provided. For questions which require units, give your answers in the units stated. (20 marks)

---

21 Write down the common multiple of 3 and 5 that is nearest to 27

Ans: _____

---

22 A wallet costs \$30.40. A belt costs \$16.60 less than the wallet.

(a) Find the cost of the belt.

(b) Find the cost of 40 such wallets.

Ans: (a) \$_____

(b) \$_____

---

23 The opening hours of a shop are shown below. How long is the shop open each day? Give your answer in hours and minutes.

The Precious Bear Shop Open Daily 10.30 a.m. to 5.45 p.m.

Ans: _____ h _____ min

---

24 There were 500 people at a food fair on Monday. On Tuesday, there were 400 people at the food fair. What was the percentage decrease in the number of people who went to the food fair from Monday to Tuesday?

Ans: _____ %

---

25 Mrs Tham bought 2780 beads to make some necklaces. She used 9 beads for each necklace. What was the greatest number of such necklaces made by Mrs Tham?

Ans: _____

---

26 Andy has $\frac{1}{2}$ ℓ of oil. He has $\frac{1}{5}$ ℓ less oil than Mei Yan. How much oil does Mei Yan have?

Ans: _____ ℓ

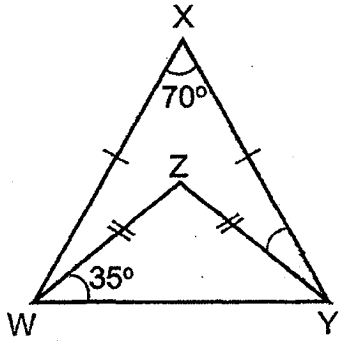
---

27 Mr Chan packs $\frac{3}{4}$ kg of curry powder into small packets. Each small packet contains $\frac{1}{8}$ kg of curry powder. How many small packets of curry powder are there?

Ans: _____

---

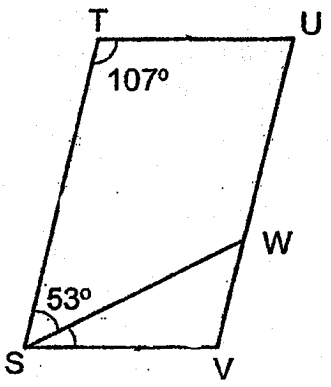
28 In the figure below, WXY and WZY are isosceles triangles. WX = YX and WZ = YZ. $\angle WXY = 70^\circ$ and $\angle YWZ = 35^\circ$. Find $\angle XYZ$.



Ans: _____ °

---

29 In the figure below, STUV is a parallelogram.
$\angle STU = 107^o$ and $\angle TSW = 53^o$. Find $\angle VSW$.



Ans: _____ °

---

30 The length and breadth of a rectangle are $3y$ metres and $(y + 1)$ metres respectively. Find its perimeter given that $y = 5$.

Ans: _____ m

End of Paper

NANYANG PRIMARY SCHOOL

PRELIMINARY EXAMINATION 2019

PRIMARY 6

MATHEMATICS PAPER 2

Duration: 1 hour 30 minutes

INSTRUCTIONS TO PUPILS

1. Do not turn over this page until you are told to do so.
2. Follow all instructions carefully.
3. Answer all questions.
4. Write your answers in this booklet.
5. The use of an approved calculator is expected, where appropriate.

Name: _____ ( )

Class: Primary 6 ( )

Parent's Signature: _____

Booklet A	**/ 20**
Booklet B	**/ 25**
Paper 2	**/ 55**
Total	**/ 100**

Any query on marks awarded should be raised by 2 September 2019. We seek your understanding in this matter as any delay in the confirmation of marks will lead to delays in the generation of results.

Questions **1** to **5** carry 2 marks each. Show your working clearly and write your answers in the spaces provided. For questions which require units, give your answers in the units stated. (10 marks)

---

1 Adele has n albums. Benjamin has $5n$ albums. Adele has 8 fewe albums than Benjamin. How many albums does Adele have?

Ans: _____

---

2 Tap A takes 36 minutes to fill a tank completely. Tap B takes 72 minutes to fill the same tank completely. How many minutes will Tap A and Tap B take to fill the tank completely when they are turned on at the same time?

Ans: _____ min

---

3 The average number of books that Ada, Baba and Cindy have is 17. Cindy has 21 books. Baba has more books than Ada. At most, how many books does Ada have?

Ans: _____

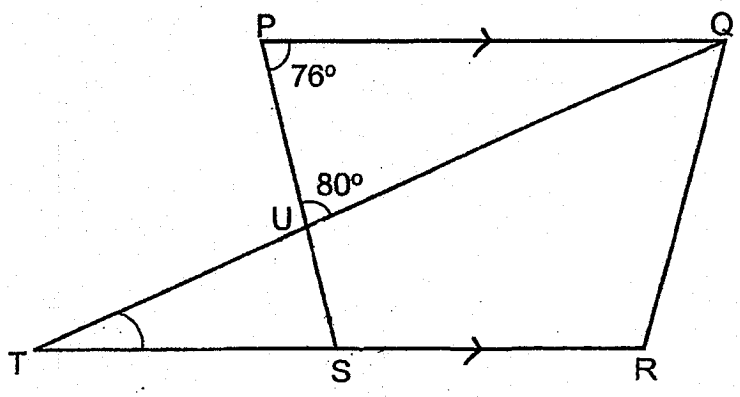
---

4 Susan deposits $50 000 in a bank for one year. The interest rate is 1.8% per year. How much will she have in the bank at the end of one year?

Ans: $_____

---

5 In the figure below, PQRS is a trapezium. TUQ and TSR are straight lines. PQ // SR. $\angle PUQ = 80°$ and $\angle QPU = 76°$. Find $\angle STU$.

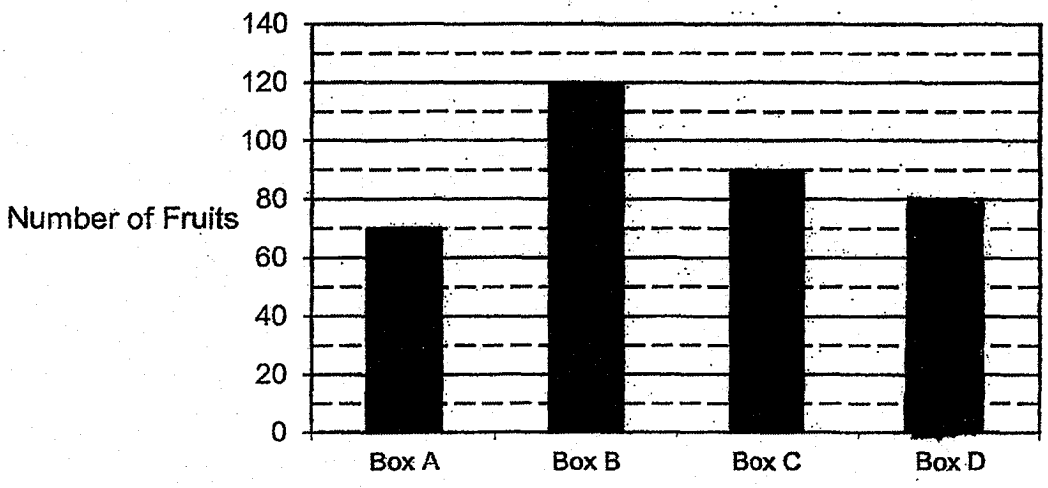


Ans: _____ °

For questions **6** to **17**, 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. (45 marks)

---

6 Mdm Ler has 4 boxes of fruits, Box A, Box B, Box C and Box D. The bar graph below shows the number of fruits in each box. The bar representing Box D has not been drawn.



(a) How many more fruits are there in Box C than Box A?

(b) Box B contains only pears and oranges. There are 4 more pears than oranges in Box B. How many oranges are there in Box B?

(c) The total number of fruits in the 4 boxes is 360. Find the number of fruits in Box D.

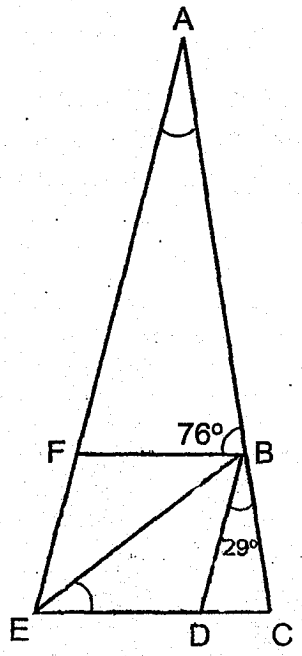
Ans: (a) _____ [1]

(b) _____ [2]

(c) _____ [1]

---

7 In the figure below, BDEF is a rhombus. ACE is a triangle. $\angle ABF = 76^\circ$ and $\angle DBC = 29^\circ$.



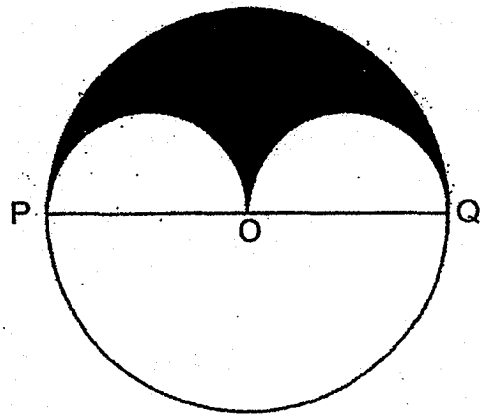
(a) Find $\angle BED$.

(b) Find $\angle EAC$.

Ans: (a) _____ [2]

(b) _____ [2]

8 The figure below shows a large circle and two identical small semicircles. The diameter of the large circle, POQ, is 24 cm.



(a) Find the perimeter of the shaded part.
Take $\pi = 3.14$

(b) Find the total area of the unshaded parts.
Take $\pi = 3.14$.

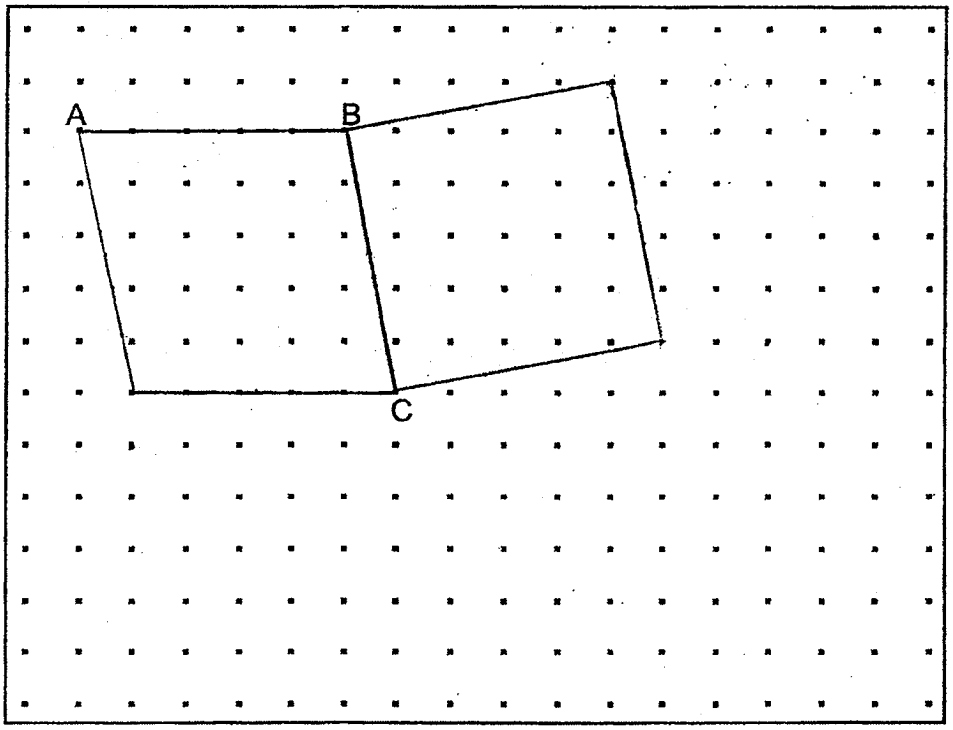
Ans: (a) _____ [2]

(b) _____ [3]

9 In the square grid below, AB and BC form two sides of a parallelogram ABCD. Each side is drawn by joining dots on the square grid with a straight line. In the same way,

(a) complete the drawing of parallelogram ABCD. [1]

(b) Using the given line BC, complete the drawing of square BCEF such that it does not overlap parallelogram ABCD. [2]



10 At a sports shop, each basketball cost $23.60 and each football cost $36.40. Mr Chong bought 3 times as many basketballs as footballs. He spent $550.40 more on the basketballs than the footballs. How many footballs did Mr Chong buy?

Ans: _____ [3]

---

11 There are some children in a hall. $\frac{5}{9}$ of them are boys. The girls are divided equally into 11 groups. The total number of girls is fewer than 60. There are 6 boys who wear spectacles. How many boys do not wear spectacles?

Ans: _____ [3]

---

12 Da Ren has 10 candies. Elijah has 30 candies. Faith has 4 fewer candies than the average number of candies that Da Ren, Elijah and Faith have. How many candies do they have altogether?

Ans: _____ [3]

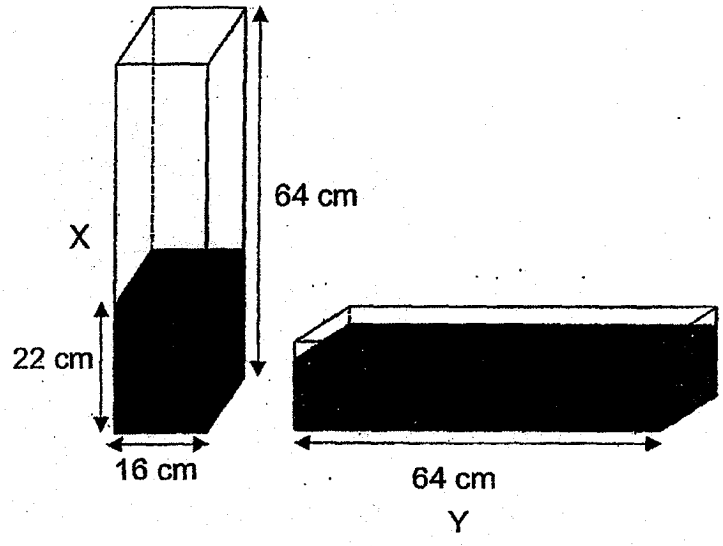
---

13 At 7 a.m., Cyclist A left Town M for Town N. At 8 a.m., Cyclist B left Town M for Town N. Cyclist A travelled at a constant speed of 15 km/h and Cyclist B travelled at a constant speed of 10 km/h. Both cyclists did not change their speeds throughout. After arriving at Town N, Cyclist A immediately left Town N for Town M. Cyclist A and Cyclist B passed each other at 11 a.m. At what time did Cyclist B arrive at Town N?

Ans: _____ [3]

---

14 In the figure below, X and Y are identical rectangular tanks. X has a square base of side 16 cm and a height of 64 cm.



At first, X was completely filled with water and Y was empty. John poured the water from X to Y, without spilling, until the height of the water level in X became 22 cm.

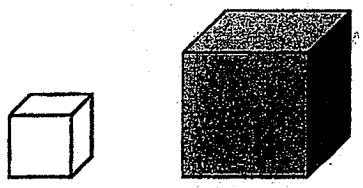
(a) How much water was there in Y in the end?

(b) Find the height of water in Y in the end.

Ans: (a) _____ [2]

(b) _____ [2]

15 The figure below shows a grey cube and a white cube. The length of each edge of the grey cube is twice that of the white cube. Xin Neng wants to use 5 grey cubes and the least number of white cubes to build a new cube.



White cube Grey cube

(a) How many white cubes does Xin Neng need to build the new cube?

(b) Given that the volume of the new cube is 1728 cm^3, find the length of the edge of the white cube.

Ans: (a) _____ [2]

(b) _____ [2]

16 The table below shows the number of pens in each type of bag.

Type of bag	Number of pens per bag
Red	40
Blue	50
Green	60

(a) Mdm Ng has a total of 8 red and green bags. Find the smallest possible difference between the total number of pens in Mdm Ng's red bags and the total number of pens in her green bags.

(b) Mr Lee has some red and some blue bags. The ratio of the total number of pens in Mr Lee's red bags to the total number of pens in his blue bags is 6 : 5. Express the number of his blue bags as a fraction of the total number of his bags.

Ans: (a) _____ [2]

(b) _____ [2]

17 Joong Ki, Minho and Ali have some green and some red buttons. Joong Ki has 9 more buttons than Minho. Minho has 5 more green buttons than Joong Ki. The ratio of the number of red buttons that Joong Ki has to the number of red buttons that Minho has is 5 : 3. The ratio of the number of green buttons to red buttons Ali has is 3 : 1.

(a) How many red buttons do Joong Ki and Minho have altogether?

(b) Each statement below is either true, false or not possible to tell from the information given. For each statement, put a tick (✔) to indicate your answer.

	True	False	Not possible to tell
Ali has 11 more green buttons than red buttons.			
The total number of buttons that Joong Ki, Minho and Ali have is an odd number.			

[2]

Ans: (a) _____ [3]

End of Paper

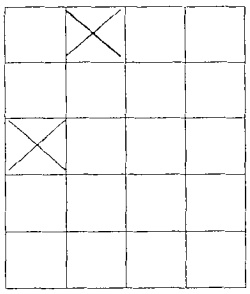
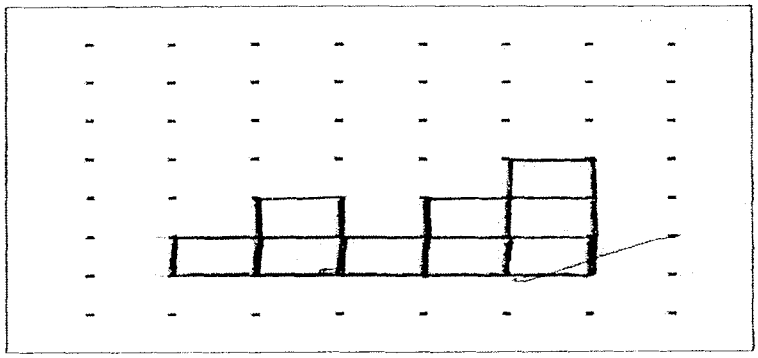
SCHOOL : NANYANG PRIMARY SCHOOL
LEVEL : PRIMARY 6
SUBJECT : MATH
TERM : 2019 PRELIM

PAPER 1 BOOKLET A

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

Q 11	Q12	Q13	Q14	Q15
4	3	4	1	4

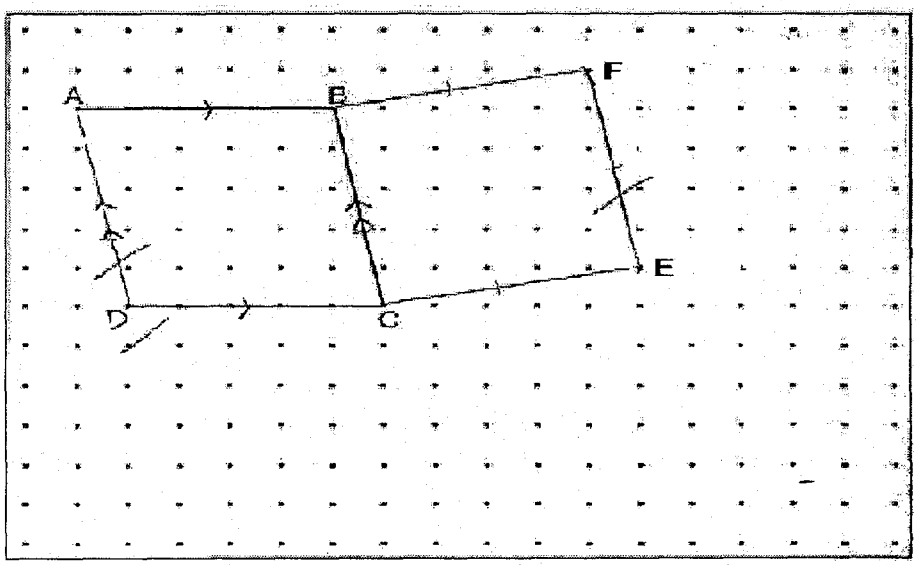
PAPER 1 BOOKLET B

Q16)	2m = 200cm $\frac{80}{200} = \frac{2}{5}$
Q17)	6.04kg = 6040g
Q18)	
Q19)	Side View 

Q20)	10
Q21)	30
Q22)	a)\$30.40 – \$16.60 = \$13.80 b)\$30.40 x 40 = \$1216
Q23)	7h 15min
Q24)	500 – 400 = 100 $\frac{100}{500}$x 100 = 20%
Q25)	2790 ÷ 9 = 308
Q26)	$\frac{1}{2} + \frac{1}{5} = \frac{5}{10} + \frac{2}{10} = \frac{7}{10} l$
Q27)	$\frac{3}{4} = \frac{24}{32}$ $\frac{1}{8} = \frac{4}{32}$ 24 ÷ 4 = 6
Q28)	∠ZWY = ∠ZYW 180° – 70° = 110° 110° ÷ 2 = 55° 55° – 35° = 20°
Q29)	180° – (107° + 53°) = 20°
Q30)	5 × 3 = 15 5 + 1 = 6 6 x 2 = 12 15 x 2 = 30 30 + 12 = 42m

PAPER 2

Q1)	A : B 1 : 5 5 – 1 = 4 8 ÷4 = 2
Q2)	A B 36min→tank 72min →tank 1min →$\frac{1}{36}$ tank 1min →$\frac{1}{72}$ tank In 1min →A+B =$\frac{1}{36} + \frac{1}{72} = \frac{2}{72} + \frac{1}{72} = \frac{3}{72}$ = 72 ÷ 3 = 24 min

Q3)	17 x 3 = 51 51 – 21 = 30 30 ÷ 2 = 15 15 – 1 = 14
Q4)	$\frac{101.8}{100}$x $50000 = $50900
Q5)	∠PSR = 180° – 76° = 104° ∠QUS = 180° – 80° = 100° ∠STU = 180° – 80° – 76° = 24°
Q6)	a)90 – 70 = 20 fruits b)120 – 4 = 116 116 ÷ 2 = 58 oranges c)70 + 90 + 120 = 280 360 – 280 = 80fruits
Q7)	a)180° – (76° + 29°) = 75° 75° ÷ 2 = 37.5° b)37.5° x 2 = 75° 180° – 75° = 105° 180° – 105° = 75° 180° – 75° – 76° = 29°
Q8)	a)24 x 3.14 x $\frac{1}{2}$ = 37.68 24 ÷ 2 = 12 12 x 3.14 = 37.68 37.68 + 37.68 =75.36 cm b)12 x 12 x 3.14 x $\frac{1}{2}$ = 226.08 12 ÷ 2 = 6 6 x 6 x 3.14 = 113.04 113.04 + 226.08 = 339.12cm²
Q9)	

Q10)

$23.60 x 3 = $70.80
$70.80 – $36.40 = $34.40
$550.40 ÷ $34.40 = 16 footballs

Q11)

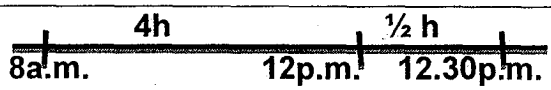
44 ÷ 4 = 11
11 x 5 = 55
55 – 6 = 49 boys

Q12)

30 – 4 = 26
26 + 10 =36
36 ÷ 2 = 18
18 x 3 = 54

Q13)

10 x 3 = 30
15 x 4 = 60
60 + 30 = 90
90 ÷ 2 = 45
45 ÷ 10 = $4\frac{1}{2}$h



ANS: 12.30p.m.

Q14)

a)64 – 22 = 42
42 x 16 x 16 = 10752
10752cm³→ 10.752
b)10752 ÷ 64 ÷ 16 = 10.5cm

Q15)

a)2 x 2 x 2 = 8
8 x 3 = 24 cubes

b)$\sqrt[3]{1728}$= 12
12 ÷ 2 = 6
6 ÷ 2 = 3cm

Q16)

a)40 x 5 = 200
60 x 3 = 180
200 = 180 = 20

b) R : B
(6 x 20) : (5 x 20)

$120 \div 40 = 3$
$100 \div 50 = 2$

$\frac{2}{3+2} = \frac{2}{5}$

Q17)

a)9 + 5 = 14
5 – 3 = 2
14 ÷ 2 = 7
7 x 8 = 56 red buttons

b)

True	False	Not
	√	
√		