NANYANG PRIMARY SCHOOL

PRELIMINARY EXAMINATION 2015

PRIMARY 6

MATHEMATICS

PAPER 1

DURATION: 50 MINUTES

Booklet A	**/ 20**
Booklet B	**/ 20**

Paper 1 Total: / 40

Name: _____ ( )

Class: Primary 6 ( )

Date: _____

Any query on marks awarded should be raised by **8th September 2015**. We seek your understanding in this matter as any delay in the confirmation of marks will lead to delays in the generation of results.

Parent's Signature: _____

DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO.
FOLLOW ALL INSTRUCTIONS CAREFULLY.
ANSWER ALL QUESTIONS.

YOU ARE **NOT** ALLOWED TO USE A CALCULATOR.

PAPER 1 (BOOKLET A)

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 the oval (1, 2, 3 or 4) on the Optical Answer Sheet.

(20 marks)

---

1 Which one of the following numbers is greater than 320 tens?

(1) 32

(2) 320

(3) 3200

(4) 32 000

2 Subtract 97 from the sum of 658 and 143.

(1) 612

(2) 702

(3) 704

(4) 898

3 How many common factors are there in 16 and 24?

(1) 12

(2) 14

(3) 3

(4) 4

4 Express 40 tenths and 55 thousandths as a decimal.

(1) 0.405

(2) 0.455

(3) 4.055

(4) 40.55

5 3 similar shirts cost $206.70. What is the cost of 1 such shirt?

(1) $70.00

(2) $68.90

(3) $66.90

(4) $60.90

6 The volume of a cuboid with a height of 7 m is 252 m^3. All the sides of the cuboid are whole numbers. Which one of the following is **NOT** a possible length of the cuboid?

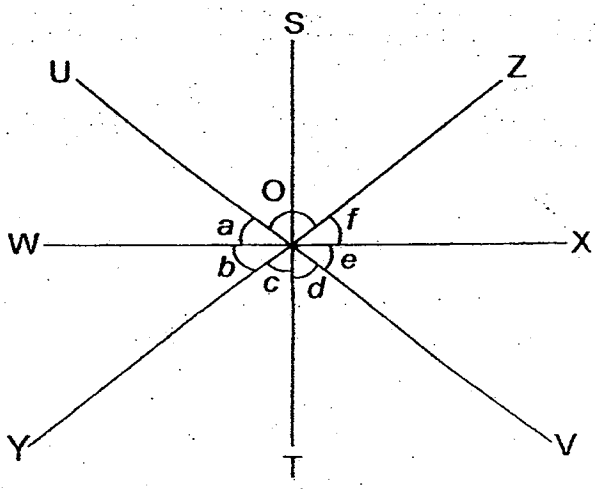
(1) 9 m

(2) 11 m

(3) 18 m

(4) 36 m

7 In the figure below, ST, UV, WX and YZ are straight lines. Which of the following angles, when added up, have the same value as ∠UOZ?



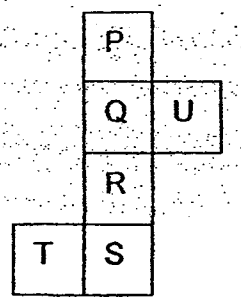
(1) ∠a and ∠b

(2) ∠c and ∠d

(3) ∠b, ∠c and ∠d

(4) ∠c, ∠d and ∠e

8 The figure below shows the net of a cube. Which of the following 2 faces lie opposite each other when the net is folded into a cube?



(1) P and Q

(2) P and S

(3) R and U

(4) T and U

9 Find the value of $2 \times 5y + 3y \times 0$, when $y = 3$.

(1) 0

(2) 13

(3) 30

(4) 39

10 The usual price of a fan was $240. During a sale, it was sold at a discount of 20%. How much did the fan cost during the sale?

(1) $40

(2) $48

(3) $192

(4) $200

11 Tap A took 20 minutes to fill a pool to the brim. Tap B took 50 minutes to fill the same pool to its brim. Tap A was turned on for 10 minutes and then turned off. How long did Tap B take to fill the rest of the pool to the brim?

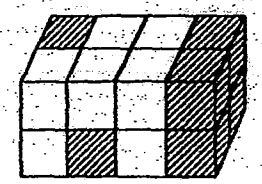
(1) 15 min

(2) 20 min

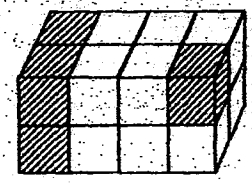
(3) 25 min

(4) 30 min

12 The diagrams below show the front view and the back view of a cuboid. The cuboid is made up of a total of 16 white and shaded 1-cm cubes. What is the total volume of the shaded cubes?



Front View



Back View

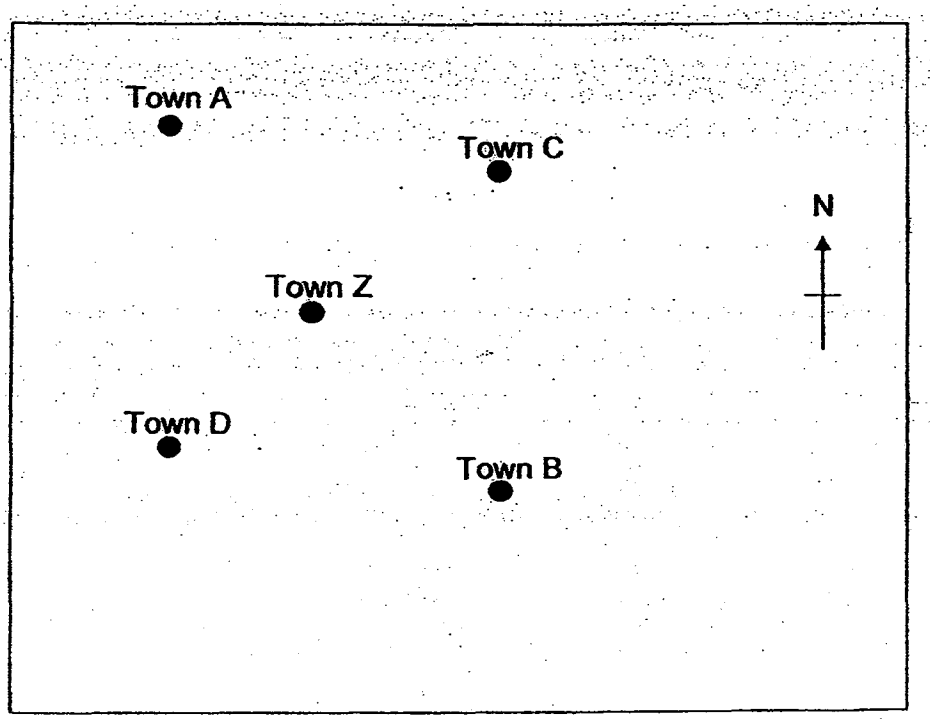
(1) 6 cm^3

(2) 10 cm^3

(3) 11 cm^3

(4) 16 cm^3

13 Ameer had to deliver goods to 2 towns from Town Z. He was given a map and the following instructions:
Drive southwest from Town Z to the first town to do the first delivery.
From the first town, drive north towards the next town to do the final delivery.



Which town did Ameer do the final delivery?

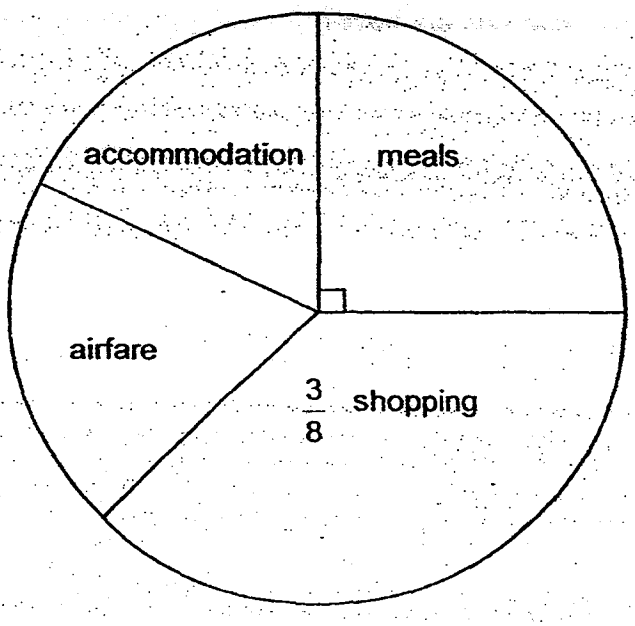
(1) Town A

(2) Town B

(3) Town C

(4) Town D

14 The pie chart below shows the amount that Josephine spent on the different items on her trip. She spent the same amount on accommodation and airfare. She spent a total of $1600.



How much did Josephine spend on her airfare and accommodation?

(1) $200

(2) $300

(3) $400

(4) $600

15 There is an equal number of pupils in 6A and 6B. The ratio of the number of boys to the number of girls in 6A is 2 : 1. The ratio of the number of boys to the number of girls in 6B is 4 : 11. What fraction of the pupils in the 2 classes are boys?

(1) $\frac{6}{18}$

(2) $\frac{7}{15}$

(3) $\frac{8}{15}$

(4) $\frac{14}{15}$

Name: _____ ( ) Class: Pr 6 ( )

P6 Prelim 2015

PAPER 1 (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 Find the value of 26 × 108.

Ans: _____

---

17 $\frac{3}{4} + \frac{3}{4} + \frac{3}{4} = 1 + \square \times \frac{1}{4}$

What is the missing number in the box?

Ans: _____

---

18 Sally uses $\frac{3}{2}$ cups of sugar to make a cake. How many cups of sugar will she use to make 5 such cakes?

Ans: _____

---

19 Tom's mass is 48.54 kg. Round off his mass to 1 decimal place.

Ans: _____ kg

---

20 A plane took 4 h 30 min to fly from Singapore to Shanghai. It left Singapore at 7.55 a.m.. At what time did the plane arrive at Shanghai?

Ans: _____ p.m.

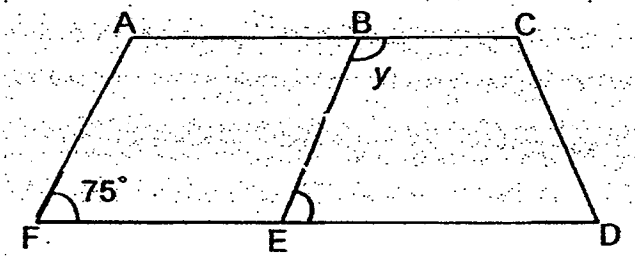
---

21 What is 3005 g in kg?

Ans: _____ kg

---

22 In the figure below, ABEF is a parallelogram and BCDE is a trapezium. Given that $\angle AFE = 75^\circ$, find $\angle y$.



Ans: _____ °

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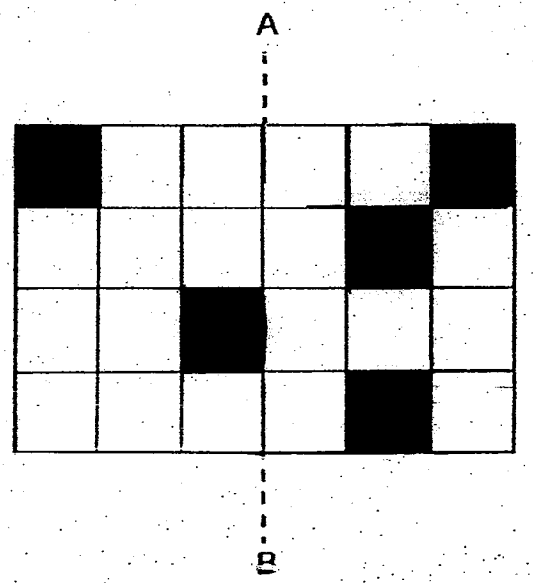
23 In the figure below, AB is the line of symmetry. Shade 3 more squares to make it symmetrical.



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24 The angles in a four-sided figure are in the ratio 1 : 2 : 3 : 4. Find the value of the smallest angle in the figure.

Ans: _____ °

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25 Adam took 20 min to complete a 8-km race. Find his average running speed in m/min.

Ans: _____ m/min

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)

---

26 The product of two fractions is $\frac{3}{8}$. One of the fractions is $\frac{1}{2}$. What is the other fraction?

Ans: _____

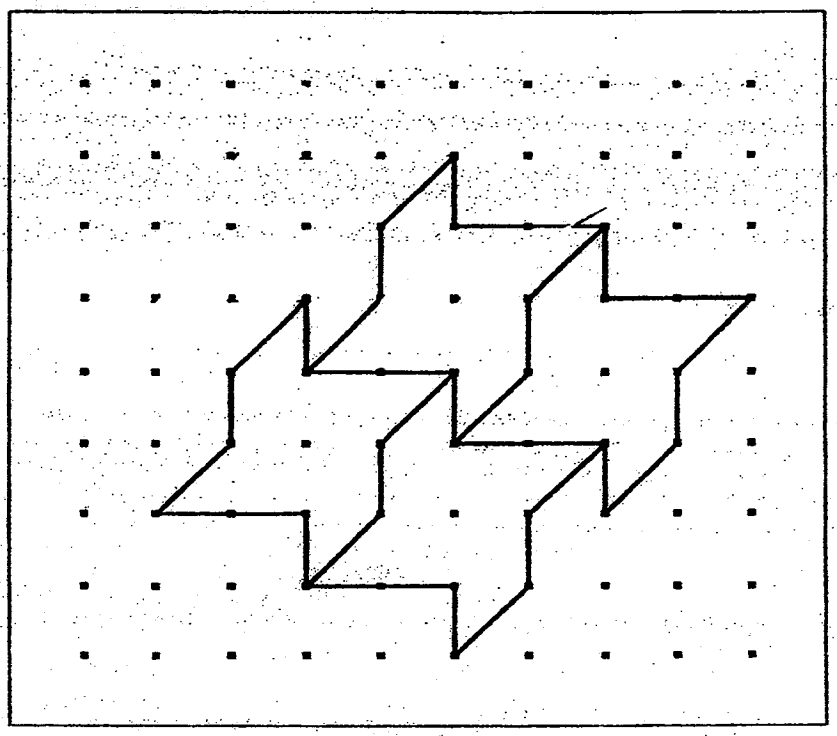
---

27 The length of a rectangle is 6 times its breadth. Given that the area of the rectangle is 2400 cm^2, find its breadth.

Ans: _____ cm

---

28 In the figure below; extend the tessellation by drawing 1 more unit shape in the space provided within the box.



29 Participants of a spelling bee contest must obtain at least a certain score in the first round to qualify for the second round. There were 200 participants in the first round. The table below shows the bands of score obtained by the participants.

Band of Score	Number of Participants
Below 10	20
11 - 20	35
21 – 30	15
31 – 40	40
41 – 50	60
Above 51	30

35% of the participants did not qualify for the second round. From the table above, what was the lowest score a participant had obtained to qualify for the second round?

Ans: _____

30 Bala is $7n$ years old now. In 20 years' time, Bala will be 3 times as old as Ali. Find Ali's age in 20 years' time.

Ans: _____

++++END OF PAPER++++

NANYANG PRIMARY SCHOOL

PRELIMINARY EXAMINATION 2015

PRIMARY 6

MATHEMATICS

PAPER 2

DURATION: 1 HOUR 40 MINUTES

Paper 2 Total	**/ 60**
GRAND TOTAL	**/ 100**

Name: _____

Class: Primary 6 ( )

Date: _____

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PAPER 2

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.

(10 marks)

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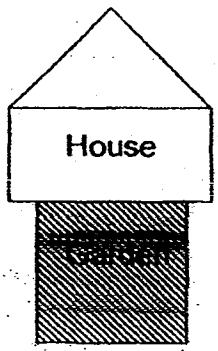
1 Fill in the boxes with +, −, × and/or ÷ to make the number statement true. Use each operation only once.

(6 ☐ 6) ☐ 6 ☐ 6 = 66

---

2 Alice had a square garden in front of her house as shown in the figure below. She used a total of 24 m of fence to enclose the 3 sides of the garden. What was the area of the garden?



Ans: _____ m^2

---

3 I think of a number and multiply it by 10 to get a new number. The sum of the original number and the new number is 253. What is the original number?

Ans: _____

---

4 Tank A contains some water with a water level of 51 cm. Tank B is empty. The length of Tank A is half that of Tank B and the breadth of Tank B is three times that of Tank A. What is the water level in Tank B if all the water in Tank A is poured into Tank B?

Ans: _____ cm

---

5 The average mass of a group of boys was 45 kg. When the nurse measured and recorded the mass of one of the boys, she wrongly recorded his mass as 42 kg when it should have been 24 kg. As a result, she calculated the average mass as 47 kg. How many boys were there in the group?

_____

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 There were 24 passengers on a bus. The ratio of the number of men to the number of women to the number of children was 3 : 2 : 1. At the next stop, 10 more people boarded the bus. 6 of them were men, 2 of them were women and the rest were children. What was the percentage increase of children on the bus?

Ans: _____ [3]

---

7 Ying and Jones had some money each. The amount of money that Ying had was $\frac{1}{4}$ the amount of money Jones had. They wanted to buy a watch each but Ying was short of \$26.60 and Jones was short of \$15.20. How much was the watch?

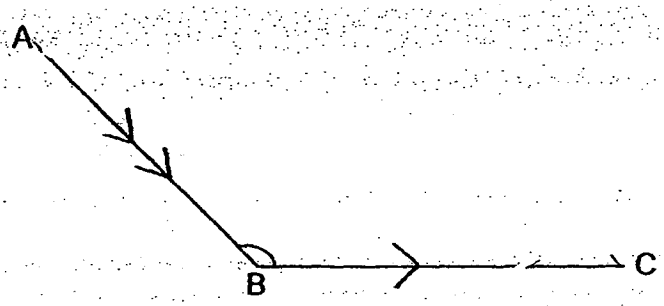
Ans: _____ [3]

---

8 In the figure below, AB and BC are two sides of a parallelogram ABCD.

(a) Measure and write down the value of ∠ABC.

(b) Complete the drawing of the parallelogram. [2]



Ans : (a) _____ [1]

---

9 Irfan bought some tarts and pies for $17.60. Each tart cost $0.80 and each pie cost $1.20. Given that 80% of what she bought were tarts, how many more tarts than pies did he buy?

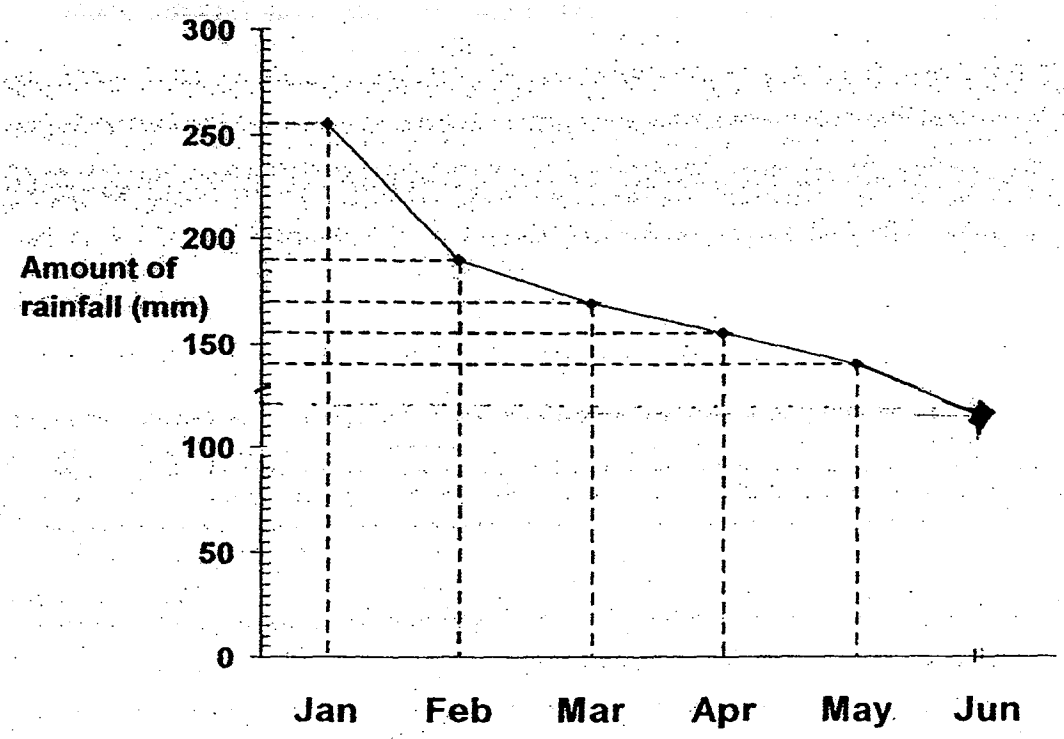
Ans: _____ [3]

---

10 An express train left Town P for Town Q. At the same time, a normal train left Town Q for Town P. The average speed of the express train was 90 km/h more than that of the normal train. The express train and normal train took 4 hours and 10 hours to reach their destinations respectively. Find the average speed of the express train.

Ans: _____ [3]

11 The line graph below shows the amount of rain collected in a town from January to June.



(a) How many percent more rain was collected in January than in March?

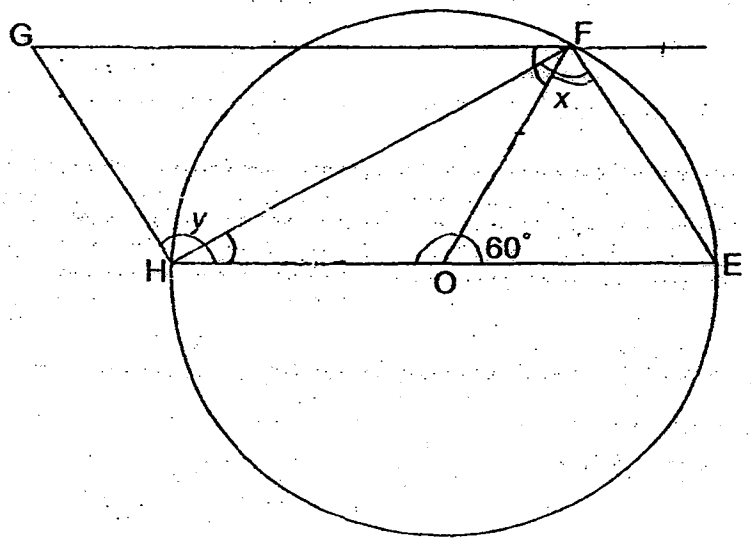
Ans : (a) _____ [2]

(b) The ratio of the amount of rain collected in May to the amount of rain collected in June was 7 : 6. How much rain was collected in June? Complete the line graph above to show the amount of rain collected in June. [2]

12 In the figure below which is not drawn to scale, EFGH is a parallelogram. O is the centre of the circle.
Find

(a) $\angle x$

(b) $\angle y$



Ans: (a) _____ [2]

(b) _____ [2]

13 Figure 1 below is formed by a rectangular box measuring 38 cm by 15 cm and 2 identical white balls with diameters 7 cm. The two identical white balls are fixed to the box at a point. Ball A, which is the same size as the 2 identical white balls, rolls anti-clockwise along the sides of Figure 1 as shown in Figure 2. Find the distance that Ball A has rolled along Figure 1 when it returns back to its original position. (Take $\pi = 3.14$)

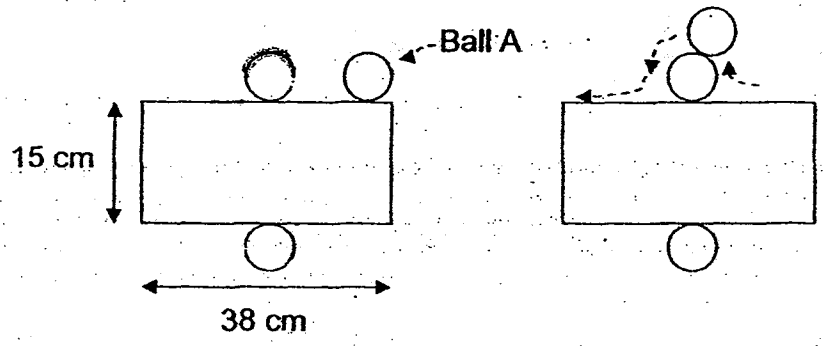


Figure 1

Figure 2

Ans: _____ [4]

14 Mr. Yong uses two different square tiles, Tile A and Tile B, to tile the floor of his of his room. Both tiles are made up of 4 small squares.

Tile A

Tile B

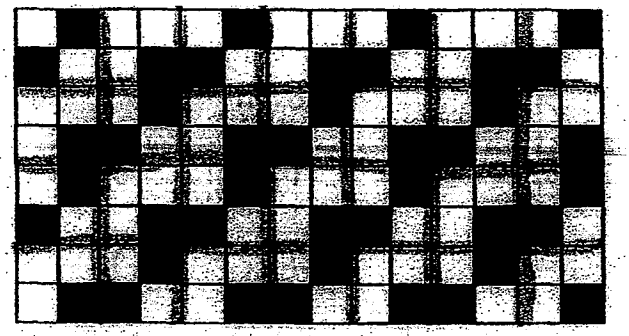
He lays the tiles alternately as shown in the diagram below. The first four rows of the tiled floor are shown below:

Row1

Row2

Row3

Row4



(a) Which tile does he use for the first tile in Row 10, Tile A or Tile B?

(b) He uses 105 tiles in all. How many black squares are there on his floor?

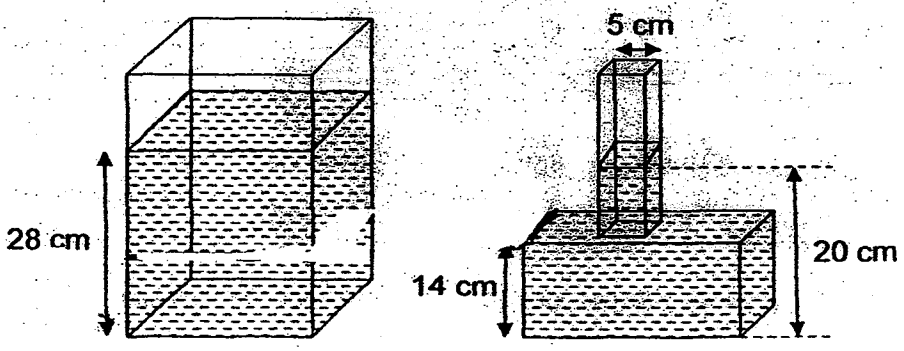
Ans: (a) _____ [1]

(b) _____ [3]

15 Tank A and Tank B contain some water. Tank A, with a base area of 756.25 cm^2, has a water level of 28 cm. Tank B is made up of a cuboid with a rectangular base and a cuboid with a square base. The water level in Tank B is 20 cm.

(a) What is the volume of water in Tank A when the water level is at 14 cm?

(b) Some water is poured from Tank A to Tank B so that the water levels in both Tank A and B are the same. What is the height of the water level in Tank B after that?



Tank B

Ans: (a) _____ [1]

(b) _____ [3]

16 Donna had some candies. She kept half of the number of candies plus 3 candies. She gave the remaining candies to Jane. Jane ate $\frac{1}{3}$ of the candies plus 4 candies. Then Jane gave the remaining candies to Kate. Kate ate $\frac{1}{4}$ of the candies and had 42 candies left. How many candies did Donna have at first?

Ans: _____ [5]

from hall B

17 On Monday, there were 280 fewer chairs in Hall A than in Hall B. On Tuesday, 0.25 of the chairs were moved ~~from Hall B~~ to Hall A. On Wednesday, 0.2 of the chairs in Hall A were moved back to Hall B. On Thursday, half of the chairs in Hall B were moved back again to Hall A. In the end, there were 520 more chairs in Hall A than Hall B. How many chairs were there in Hall B at first?

Ans: _____ [5]

18 Steve, Mark and Ryan took their father out for a meal. Steve had $40 more than Mark. If Steve paid for the meal, the amount of money that Steve, Mark and Ryan left will be in the ratio 3 : 8 : 9 respectively. If Ryan paid for the meal, the amount of money Steve, Mark and Ryan left would be in the ratio 5 : 4 : 1 respectively. If Mark paid for the meal, the amount of money Steve, Mark and Ryan left would be in the ratio 10 : 1 : 9 respectively. How much did the meal cost?

Answer: _____ [5]

++++END OF PAPER++++

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

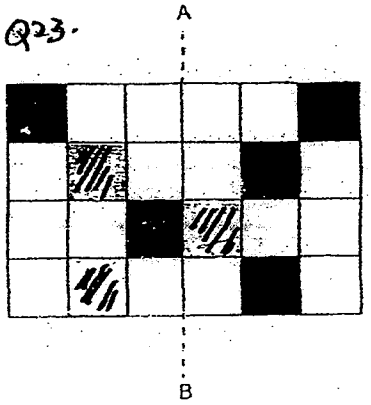
PAPER ONE

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

Q16. 2808 → 26 x 108 = 2808 Q17. 5 → $1\frac{5}{4} - 1 = \frac{5}{4}, \frac{5}{4} \div \frac{1}{4} = 5$

Q18. 7.5 → $\frac{3}{2} \times 5 = \frac{3}{2} \times 5 = \frac{15}{2} = 7.5$ Q19. 48.5kg → 48.54 ≈ 48.5

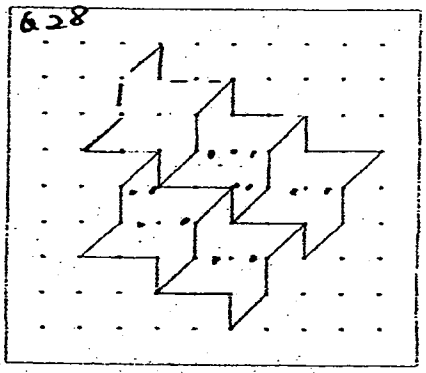
Q20. 12.25pm Q21. 3.005kg Q22. 105 **Q23. SEE PICTURE**



Q24. 36° → 1u : 2h : 3u: 4u → total 10u, 360 ÷ 10 = 36, 1u → 36°

Q25. 400m/min → 8km = 8000m, $\frac{8000}{20} = 400m/\min$

Q26. $\frac{3}{4} \rightarrow \frac{3}{8} \div \frac{1}{2} = \frac{3}{8} \times \frac{2}{1} = \frac{6}{8} = \frac{3}{4}$ Q27. 20cm → 2400 → 120 X 20 **Q28. SEE PICTURE**



Q29. 31 → 20 + 35 + 15 + 40 + 60 + 30 = 200, 35% x 200 = 70

Q30. $(\frac{7n+20}{3})$

PAPER TWO

Q1. (6 + 6) x 6 – 6 = 66 Q2. 64m² → 24÷3 = 8, 8 x 8 = 64 Q3. 23 → 11u → 253, 1u → 23.

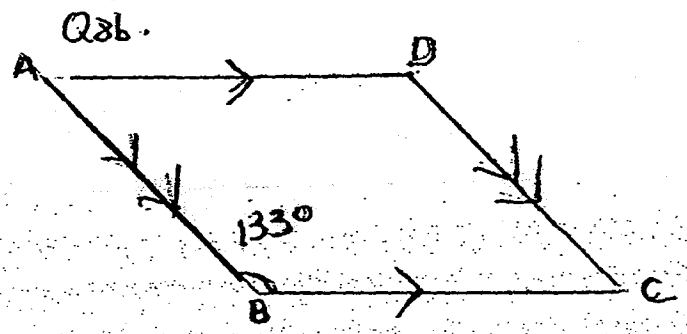
Q4. 8.5cm → Length of A : Breadth of A, 1 : 1. Length of B : Length of B 2: 3

Q5. 9 → 47 – 45= 2, 42 – 24 = 18, 18 ÷2 = 9

Q6. 50% → M : W : C → 3 :2:1, + 6 : =2: +2, 6u → 24, 1u → 24 ÷6 = 4, 10 – 6 – 2=2, $\frac{2}{4=50\%}$

Q7. $30.40 → $26.60 - $15.20 = $11.40, $11.40 ÷ 3 = $3.80, $3.80 + $26.60 = $30.40

Q8.a. 133° **Q8b. SEE PICTURE**

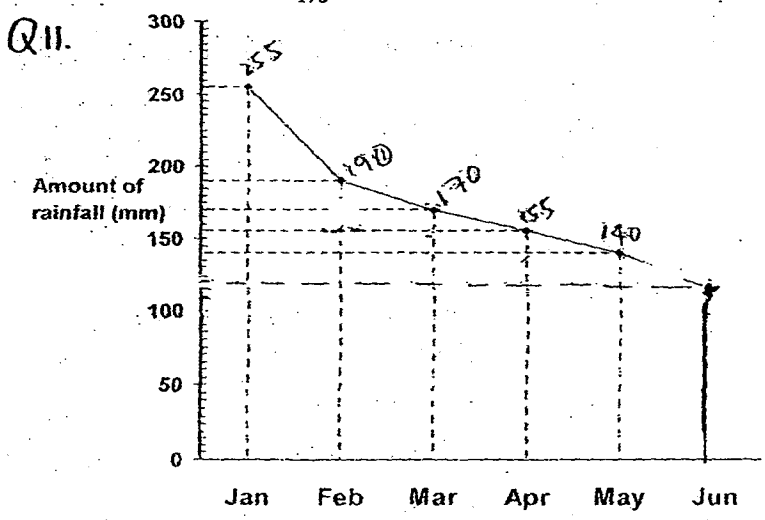


Q9. 12 → 8 x 80cents = $6.40, 2 x $1.20 = $2.40, $6.40 + $2.40 = $8.80, $17.60 ÷ $8.80=2, Tarts →16, 16-4=12, Pies →4.

Q10. 150km/hr →Express Train ; Normal Train, Time : 4: 10 → 2 : 5, Speed: 5 : 2, Distance : 1 : 1, Speed: 5 : 2, Distance : 1 : 1, 3u →90, 1u→90 ÷3=30, 5u →5 x 30 =150.

Q11a. 50% →January →255, March →170, 255 – 170 = 85, $\frac{85}{170} = 50\%$

Q11b. 120 →**SEE PICTURE**



Q12.a 90° Q12b. 120° **SEE PICTURE** → $\measuredangle HFO = \measuredangle OEF = \measuredangle OFE = 60°, \Delta HFO = isoceles, \measuredangle FHO = \measuredangle HFO = \bullet\ 180° - 120°) \div 2 = 30°, \measuredangle X = 30° + 60° = 90°, \measuredangle GFE = \measuredangle GHO = \measuredangle Y = 120°$

Q13. 99.98cm →3.98 – 7 -7 = 99.98

Q14.a. Tile B→ (odd) Row 1 →A (11), (even) Row 2 →B (10), (Odd) Row 10 →B.

Q14b. 158 → 105 ÷ 7 = 15, 11 x 8 = 88, 10 x 7 = 70, 70 + 88 = 158

Q15a. 10587.5m² →14 x 756.25 = 10587.5

Q15b. 27.774cm →756.25 + 25 = 781.25, (1756.25 x 14) + (25 x 6) = 10737.5, 107.37.5 ÷781.25 = 137.44, 137.44 + 14 =27.744.

Q16. 186 →42÷3 = 14, 14 x 4= 56, 56 +4=60, $\frac{60}{z} x\ 3 = 90, 90 + 3 = 93, 93\ x\ 2 = 186$

Q17. 744 →100u : 100u + 280, 150u + 140: 50u + 140, (150u + 140) – (50u +140) = 520, 100u = 520, 520+280=800

Q18. $140 →2u →440, 1u →$40÷2 = $20, 7U →$20 X 7 =$140.

THE END