NAN HUA PRIMARY SCHOOL
SEMESTRAL ASSESSMENT 2 – 2017
PRIMARY 5

MATHEMATICS

Paper 1

Section A: 15 Multiple Choice Questions (20 marks)

Section B: 15 Short Answer Questions (25 marks)

Total Time for Paper 1: 1 Hour

INSTRUCTION TO CANDIDATES

1. **Write your name and index number in the space provided.**
2. **Do not turn over the page until you are told to do so.**
3. **Follow all instructions carefully.**
4. **Answer all questions.**
5. **Shade your answers in the Optical Answer Sheet (OAS) provided for Questions 1-15.**
6. **You are not allowed to use calculator for Paper 1.**

Marks Obtained

Paper 1	**Booklet A**		**/ 45**
	Booklet B		
Paper 2			**/ 55**
Total			**/ 100**

_____ ( )

Class : 5 ____

Date : 1 November 2017 Parent's Signature :_____

Section A (20 marks)

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 and shade your answer (1, 2, 3 or 4) on the Optical Answer Sheet (OAS).

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1. In 8 975 264, the digit 7 is in the _____ place.

   (1) thousands

   (2) ten thousands

   (3) hundred thousands

   (4) millions

2. Express five million, three hundred and twenty thousand and nine in numerals.

   (1) 5 030 209

   (2) 5 302 009

   (3) 5 320 009

   (4) 5 329 000

3. 250 000 is _____ hundreds less than 1 million.

   (1) 750

   (2) 7 500

   (3) 75 000

   (4) 750 000

4. 2 078 cm = _____ m

(1) 0.2078

(2) 2.078

(3) 2.78

(4) 20.78

5. 54 × 99 is the same as _____ .

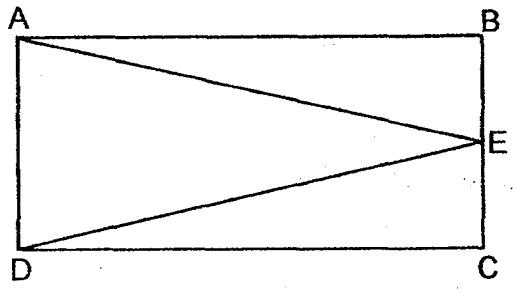
(1) 54 × 98 + 1

(2) 54 × 100 – 1

(3) 54 × 100 – 54

(4) 54 × 100 – 99

6. In the figure below, ABCD is a rectangle. What is the height of triangle ABE given that the base is BE?



(1) AE

(2) CE

(3) BC

(4) AB

7. Mrs Chan used 4 eggs to cook some dishes and had 16 eggs left. What percentage of the eggs did she use?

(1) 20 %

(2) 25 %

(3) 75 %

(4) 80 %

8. A shop sold soaps in packets of 6. Mrs Miriam paid $9 for 12 soaps. How much would she pay for 36 soaps?

(1) $72

(2) $54

(3) $27

(4) $18

9 Arrange the following lengths in **ascending** order.

240 cm, $2\frac{3}{5}$ m, 2 m 9 cm, 2.5 m

(1) $2\frac{3}{5}$ m, 240 cm, 2.5 m, 2 m 9 cm

(2) 240 cm, 2.5 m, $2\frac{3}{5}$ m, 2 m 9 cm

(3) 2.5 m, $2\frac{3}{5}$ m, 2 m 9 cm, 240 cm

(4) 2 m 9 cm, 240 cm, 2.5 m, $2\frac{3}{5}$ m

10. Diana and Elaine shared 48 marbles such that Elaine received 6 more marbles than Diana. Find the ratio of the number of Diana's marbles to the number of Elaine's marbles.

(1) 4 : 5

(2) 5 : 4

(3) 7 : 9

(4) 9 : 7

11. The total cost of 2 wallets and 1 belt is $144. The cost of the belt is $54. What is the average cost of the wallets?

(1) $ 45

(2) $ 48

(3) $ 72

(4) $ 90

12. Mr Tan bought a pizza. His son ate $\frac{1}{2}$ of the pizza and his daughter ate $\frac{1}{4}$ of the remaining pizza. What fraction of the pizza did both his children eat altogether?

(1) $\frac{1}{8}$

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

(3) $\frac{5}{8}$

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

13. The table below shows the scores of 80 participants in the Round 1 of a competition.

Score	0 - 10	11 - 20	21 - 30	31 - 40	41 - 50
No. of Participants	5	19	32	18	6

In Round 1, the top 30% of the participants were allowed to move on to the next round of competition. What was the minimum score that a participant had obtained to move on to the next round of competition?

(1) 21

(2) 30

(3) 31

(4) 40

14. For every \$6 saved by Nicholas, his father would give him another \$2. How much did his father give him altogether if he had a total of \$96 in his savings?

(1) \$ 12

(2) \$ 24

(3) \$ 48

(4) \$ 72

15. There are 20 pupils in class 5C who wear spectacles. $\frac{3}{5}$ of the pupils who wear spectacles are girls. How many boys are there in class 5C given that $\frac{1}{2}$ of the boys in this class wear spectacles?

(1) 8

(2) 10

(3) 16

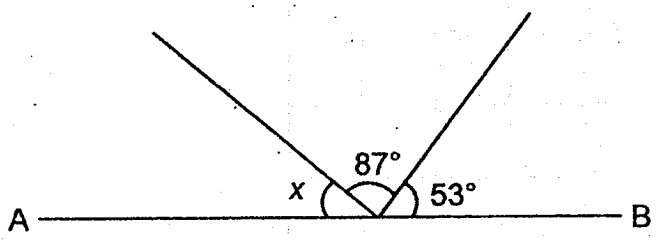
(4) 24

Section B (25 marks)

Do not write in this space

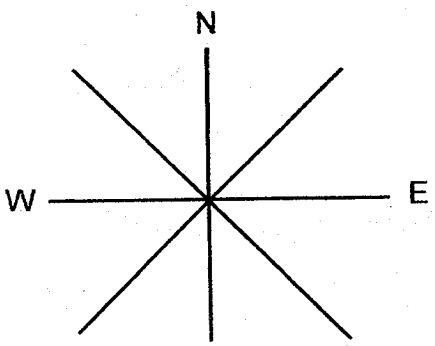
Questions **16** to **20** carry 1 mark each. Write your answers in the spaces provided. For questions which require units, give your answers in the units stated.

16. The figure below is not drawn to scale. AB is a straight line. Find $\angle x$.



Ans: _____ °

17. Elizabeth is facing south-east now. If she makes a 135° clockwise turn, in which direction will she face?



Ans: _____

18. Complete the diagram below to form a symmetric pattern. The dotted line is the line of symmetry.

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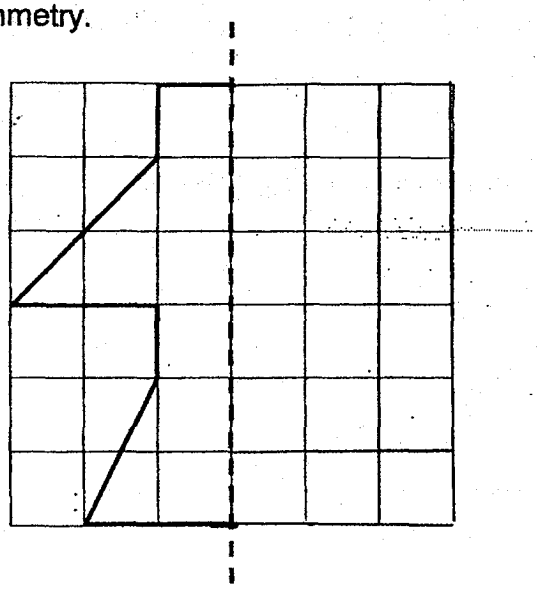
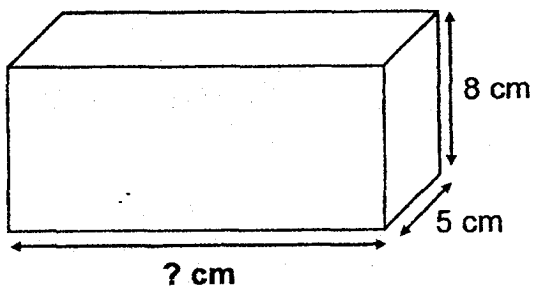


19. The volume of the box shown below is 720 cm^3.
What is the length of the box?



Ans: _____ cm

20. Jerald bought $\frac{3}{5}$ m of rope. He used $\frac{5}{8}$ of it to tie a box.
How much rope had he left?

Ans: _____ m

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.

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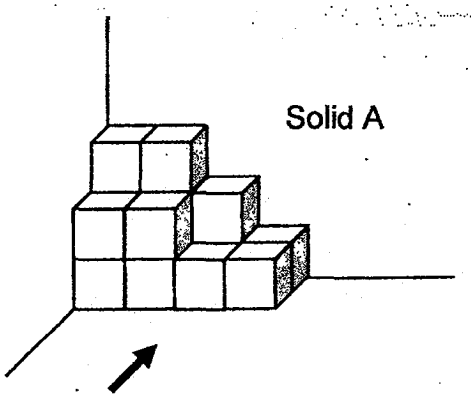
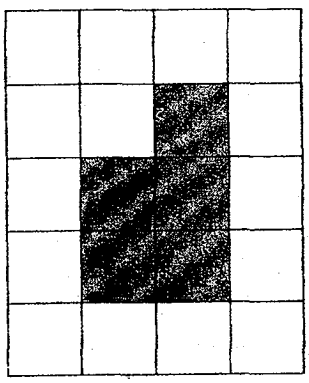
21 (a). Solid A is made up of 1-cm cubes.



Look at the figure below and identify the view for Solid A.

Put a tick (✓) next to the correct answer.

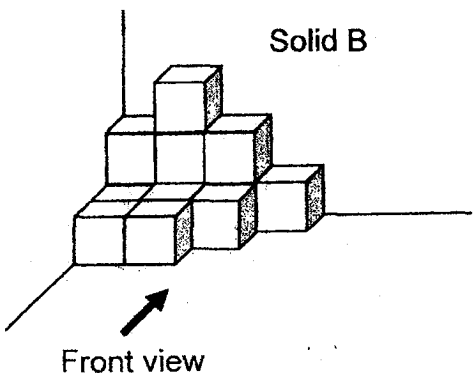


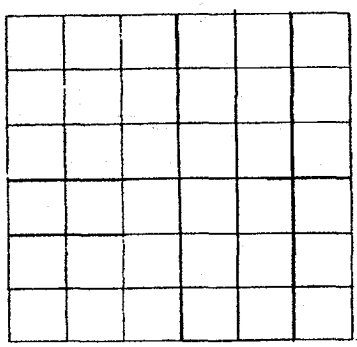
Top view ☐

Front view ☐

Side view ☐

21 (b). Solid B is made up of 1-cm cubes. Draw the top view of Solid B.





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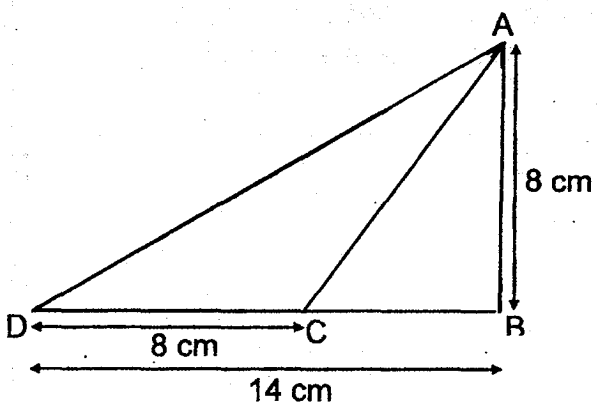
22. What is the area of triangle ABC?

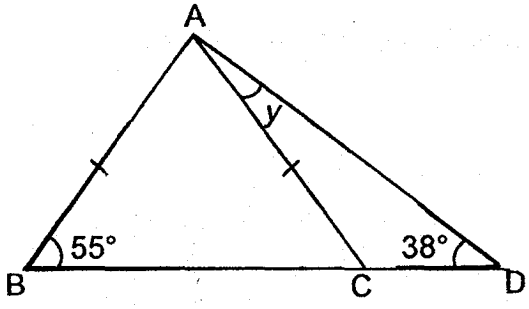


Ans: _____ cm^2

23. Mrs Lim bought a washing machine for $630 after a discount of 30%. How much was the discount?

Ans: $ _____

24. In the figure below, not drawn to scale, AB is equal to AC. Find $\angle y$.



Ans: _____

Do not write in this space

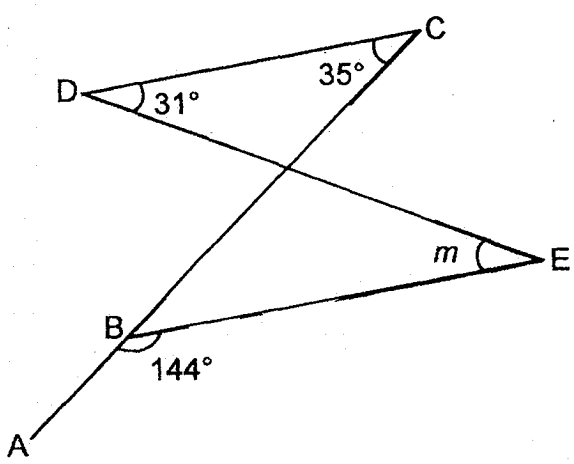
25. A printer can print 10 copies in 6 seconds. At this rate, how many copies can it print in 8 minutes?

Ans: _____

26. A cube of side 30 cm was filled with some water. Jane needed another 18 litres of water to fill the cube to the brim. How many litres of water were there in the cube at first?

Ans: _____ ℓ

27. The figure below is not drawn to scale. AC and DE are straight lines. Find $\angle m$.



Ans: _____ °

28. This year, the ratio of Jack's age to Keith's age is 3 : 5.
Last year, their average age was 27 years old. How old is Jack now?

Do not write in this space

Ans: _____ years old

29. Shanice and Karen had the same amount of money. When Shanice spent three times as much as Karen, she had $25 left while Karen had $47 left. How much did Shanice have at first?

Ans: $ _____

30. A container can be filled to the brim with either 36 cups of water or 18 glasses of water. Jonathan pours in 12 cups and 6 glasses of water into the container. What fraction of the container is filled with water? (Give your answer in the simplest form.)

Do not write in this space

Ans: _____

END OF PAPER 1

NAN HUA PRIMARY SCHOOL
SEMESTRAL ASSESSMENT 2 – 2017
PRIMARY 5

MATHEMATICS

Paper 2

Total Time for Paper 2: 1 hour 30 minutes

5 Short Answer Questions (10 marks)

12 Structured / Long Answer Questions (45 marks)

INSTRUCTION TO CANDIDATES

1. **Write your name and index number in the space provided.**
2. **Do not turn over the page until you are told to do so.**
3. **Follow all instructions carefully**
4. **Answer all questions and show your workings clearly.**
5. **You are allowed to use a calculator.**

Marks Obtained

Total		**/ 55**

Name : _____ ( )

Class : 5 ___

Date : 1 November 2017 Parent's Signature :_____

Paper 2 (55 marks)

Do not write in this space

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

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1. Alice has a rope that is 1.35 m long. Becky's rope is 0.5 m longer than Alice's rope. What is the total length of the two ropes?

Ans: _____ m

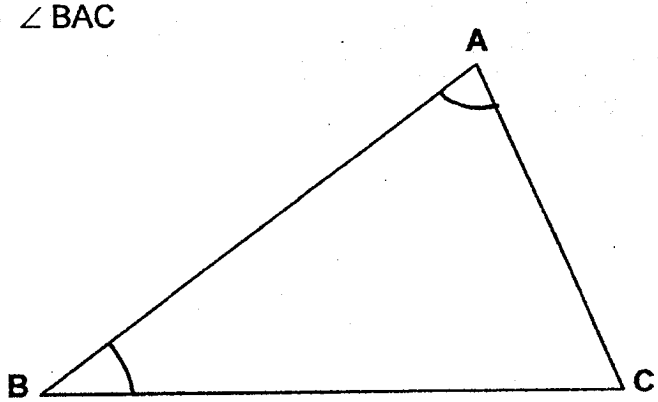
2. During a sale, a movie ticket was given free with every 3 tickets purchased. A group of 20 friends paid $187.50 and received 20 tickets. What was the price of each movie ticket?

Ans: $ _____

3. In the triangle ABC shown below, use a protractor and measure

(a) ∠ ABC

(b) ∠ BAC



Ans: (a) _____ °

(b) _____ °

4. The table below shows the rate of parking a car in a car park.

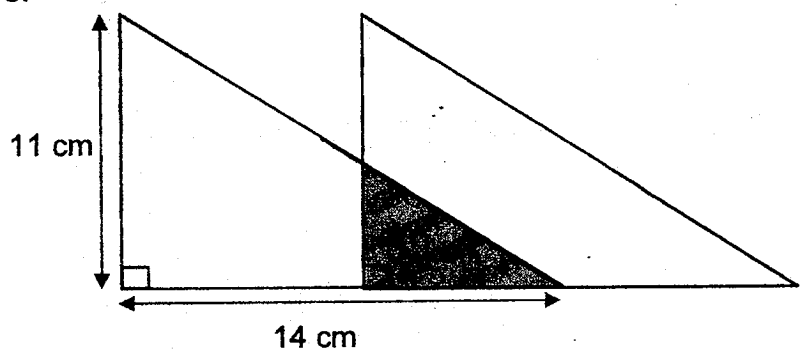
Do not write in this space

Parking Charges	
First hour	$2.50
Every additional half hour or part thereof	$1.20

How much does Mr Ho need to pay for parking his car from 7.30 a.m. to 9.15 a.m.?

Ans: $_____

5. The figure below shows two identical triangles with an overlapped area. Given that the overlapped area is 32 cm^2. Find the area of the figure.



Ans: _____ cm^2

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)

Do not write in this space

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6. Krisna and Lisa had a total of \$784. After Krisna spent $\frac{1}{6}$ of her money and Lisa spent \$124, they had the same amount left. How much money did Krisna have at first ?

Ans: _____ [3]

7. In a class of 40 pupils, there are 4 more girls than boys.
What percentage of the class are boys?

Ans: _____ [3]

8. The ratio of Mrs Lee's age to her son's age now is 4 : 1. Five years later, the ratio of Mrs Lee's age to her son's age will become 3 : 1. How old is Mrs Lee now?

Do not write in this space

Ans: _____ [3]

9. A basket contains 196 balls of three different colours. The ratio of the number of blue balls to the number of green balls is 2 : 1. The ratio of the number of red balls to the total number of balls is 1 : 7.

(a) How many red balls are there in the basket?

(b) Write the ratio of the number of green balls to the number of red balls to the number of blue balls in the simplest form.

Do not write in this space

Ans: (a) _____ [1]

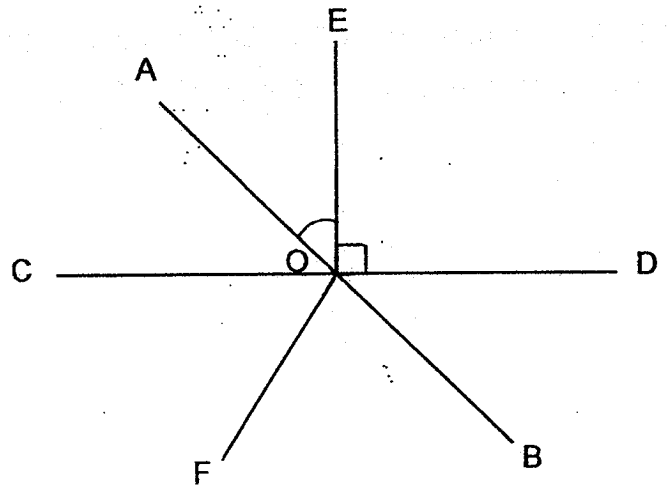
(b) _____ [2]

10. In the diagram below, AB and CD are straight lines. $\angle COF = \angle FOB$.

Given that $\angle FOD = 116°$, find

(a) $\angle AOE$.

(b) $\angle COF$.



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Ans: (a) _____ [1]

(b) _____ [2]

Do not write in this space

11. In Singapore, Goods and Services Tax (GST) is charged at 7%.
Mr Tan wants to buy two cameras that cost $1 040 each before GST.

(a) How much GST does Mr Tan have to pay for one camera?

(b) What is the total cost of the cameras inclusive of GST?

Ans: (a) _____ [1]

(b) _____ [3]

12. A group of boys shared some game cards among themselves. When each of them tried to take 9 cards each, the last boy only got 4 cards. When they took 7 cards each, there were 13 cards left.

(a) How many game cards were there?

(b) How many boys were there?

Do not write in this space

Ans: (a) _____ [2]

(b) _____ [2]

13. A box filled with 80 identical markers weighs 1.76 kg. The same box weighs 800 g when filled with 40 identical pencils. The mass of a marker is twice the mass of a pencil. What is the mass of the empty box?

Do not write in this space

Ans: _____ [4]

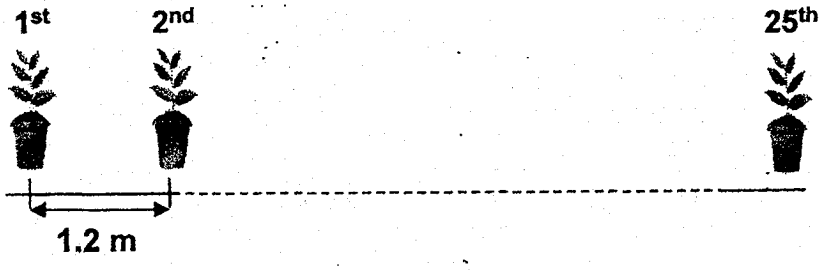
Do not write in this space

14. Jason spent $\frac{1}{3}$ of his money on a basketball. He spent $\frac{3}{4}$ of the remaining money on a badminton racket. He spent another $5 on his lunch and had $\frac{1}{8}$ of the original amount of money left. How much did the badminton racket cost?

Ans: _____ [4]

Do not write in this space

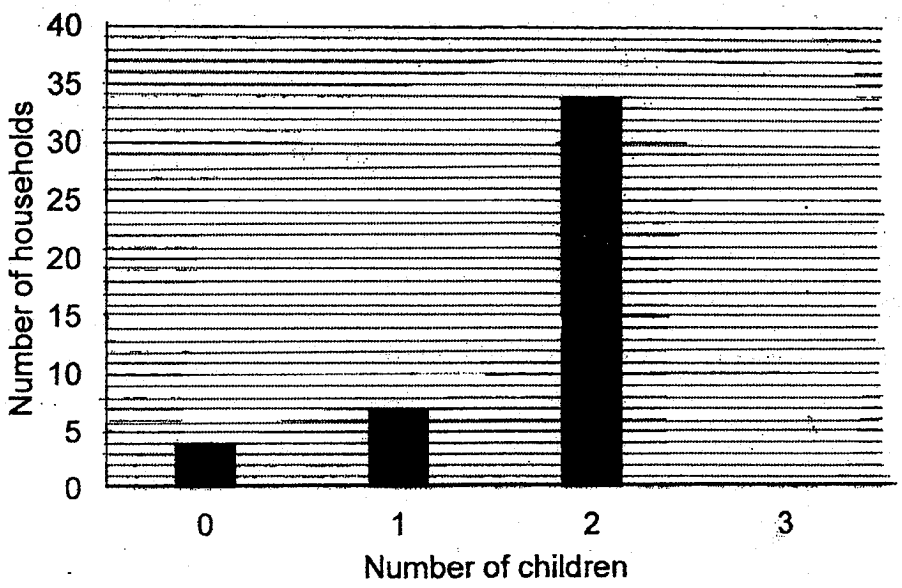
15. A company ordered 25 potted plants to line up along their corridor from one end to the other end at equal spacing of 1.2 m apart. 4 of the potted plants broke during delivery and could not be used. The company used the remaining potted plants to line up along their corridor from one end to the other end at a new equal spacing. What was the new equal spacing between two potted plants?



Ans: _____ [4]

16. A survey was conducted with 60 households to find out how many children there are in each household. None of the households have more than 3 children. The graph below shows the survey results.

Do not write in this space



(a) In the space above, draw and shade the bar for the number of households with 3 children.

(b) How many households have more than 1 child?

(c) What is the average number of children in each household?

Ans: (a) refer to graph [1]

(b) _____ [2]

(c) _____ [2]

17. Study the diagram below which are made up of circles and triangles.

Do not write in this space

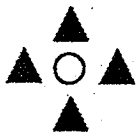


Figure 1

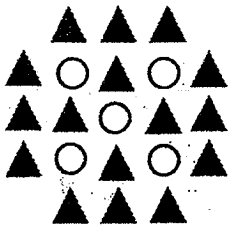


Figure 2

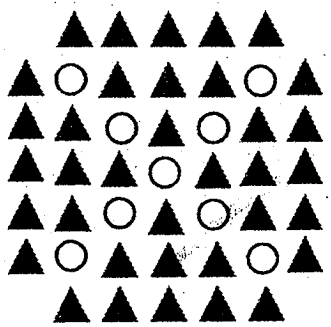


Figure 3

Complete the table below by filling in the blanks.

Figure	Number of circles	Number of triangles
1	1	4
2	5	16
3	9	36
		⋮
9	(a) _____	(b) _____

(c) In which figure are there 113 circles?

Ans: (a) _____ [1]

(b) _____ [1]

(c) _____ [3]

End-of-paper

ANSWER

YEAR	:	2017
LEVEL	:	PRIMARY 5
SCHOOL	:	NAN HUA
SUBJECT	:	MATHEMATICS
TERM	:	SA2

Paper 1 (Booklet A)

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

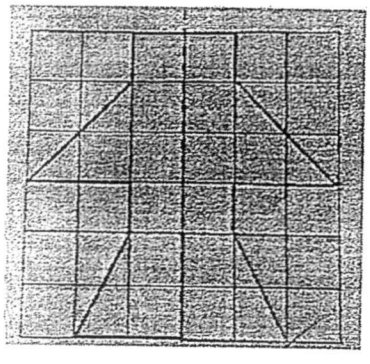
Paper 1 (Booklet B)

Q16 angle x---180°-53°-87°=40°

ANS:40°

Q17 West

Q18



Q19 cross section---8cm×5cm=40cm^2

Length---720ccm^3÷40cm^2=18cm

ANS: 18cm

Q20 $\frac{3}{5}$=0.6m

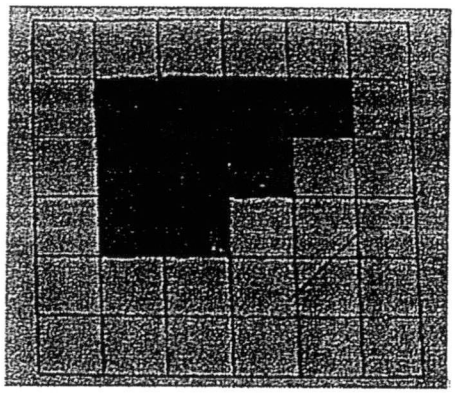
8u=0.6m

1u=0.075m

3u=0.225m

Q21 ANS: Side view

Q21b)



Q22 base of triangle ABC---14cm-8cm=6cm

Height of triangle ABC---8cm

Area of triangle ABC---6cm×8cm×0.5=24cm²

Q23 100%-30%=70%

70%---$630

1%----$630÷$70=$9

30%---$9×30=$270

ANS: $270

Q24 triangle ABC is an isosceles triangle

Angle ABC = Angle ACB(55°)

Angle ACD = 180°-55°

= 125°

Angle y = 180°-125°-38°

=17°

ANS: 17°

Q25 8 minutes=480

Sets of 6 seconds=480÷6

=80

No. of copies=80×10

=800

Q26 30cm×30cm×30cm=27000cm^2

=27L (capacity of cube)

27L-18L=9L

ANS: 9L

Q27 say the intersection point between line AC and line DE is F

Angle DFC=Angle AFE=180°-31°-35°=114°

Using the rule '1 exterior = the sum of 2 interior', we can find m, which is 144°- 114°=30°

ANS: 30°

Q28 last year total age---27×2=54

this year total age---54+2=56 (8u)

1u---56÷8=7

3u---7×3=21

ANS: 21

Q29 2u=$47-$25

=$22

3u=$22÷2×3

=$33

$33+$25=$58

ANS: $58

Q30 $\frac{12}{36}=\frac{1}{3}$

$\frac{6}{18}=\frac{1}{3}$

$\frac{1}{3}+\frac{1}{3}=\frac{2}{3}$

ANS: $\frac{2}{3}$

Paper 2

Q1 Alice rope→1.35m

Becky rope→1.35m+0.5m=1.85m

Total length→1.35+1.85=3.2m

ANS: 3.2m

Q2 1 set---3 tickets÷1 ticket=4 tickets

? set---20÷4=5 (given free)

20-5=15(not free)

(total cost) $187.50÷15=$12.50(cost of each ticket)

ANS: $12.50

Q3 ANS: a)36° b)77°

Q4 First hour---7.30a.m. to 8.30a.m.

8.30a.m. to 9.15a.m.---45 minutes

45 minutes consists of 1 half hour and another part thereof

$1.20+$1.20+$2.50=$4.90

ANS: $4.90

Q5 Area of triangle--- 14cmx11cm x 0.5=77cm²

Both triangles share the same overlapped area and so the not overlapped area is the same as well.

77cm² x 2 - 32cm² = 122cm²

ANS: 122cm²

Q6 K : L : Total

6units : ? : $784

-1 unit : -$124

5units : 5units (from this, you can see that ? is 5 units+$124)

11u---$784-$124=$660

1U----$660÷11=$60

K at first(6u)---$60x6=$360

ANS: $360

Q7 boys---(40-4)÷2=18

100%--- 40

45%----18

ANS: 45%

Q8

	Mrs Lee	Son
Before(now)	4u	1u
Change	+5	+5
After	3p	1p

1u+5=1p-----(1)

4u+5=3p-----(2)

3u+15=3p---(1)x3

1u=10

4u=10x4

=40

Q9 B : G : R : Total

2 : 1

1 : 7

a) 196 ÷ 7 = 28

G = (196-28) ÷ 3

=56

B = 56 x 2

=112

G : R : B

56 : 28 : 112

2 : 1 : 4 (b)

Q10 angle COF---180°-116°=64°(b)

Angle COF=angle FOB=64°

Angle AOC=180°-64°-64°=52°

Angle AOE=180°-52°-90°=38°(a)

ANS: a)38° b)64°

Q11 100%---$1040

7%---$1040÷100×7=$72.80(a)

2 cameras=$1040x2=$2080

100%---$2080

107%---$225.60

ANS: $225.60

Q12 a) From answer in (b), There are 9 boys

(9 boys x 9 cards) – 5 = 76

OR

(9 boys x 7 cards) + 13 = 76

Ans : 76 cards

b) 9 unit – 5 = 7 unit + 13

2 unit = 13 + 5

= 18

1 unit = 9

Ans : 9 students

Q13 2 pencils=1marker

40pencils=20markers

Box+80 markers=1.76kg

Box+20 markers=0.8kg

80-20=60

1.76-0.8=0.96

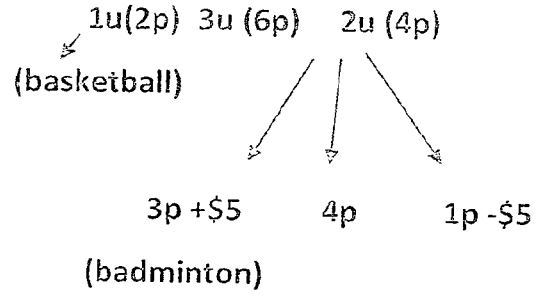
60 markers = 0.96kg

80 markers = 0.96÷60×80=1.28

1.76-1.28=0.48

ANS: 0.48

Q14 part whole left



Left with 1/8 of the original amount, hence

1y = 1p- 5 (Statement 1)

8y = 6p (Statement 2)

Statement 1 x 8 :

8y = 8p – 40 (Statement 3)

Statement 2 = Statement 3

6p = 8p – 40

2p = 40

1p = 20

3p = 3 x 20 = 60

Ans : $ 60

Q15 25 potted plants---24 intervals

length of corridor---24x1.2m=28.8m

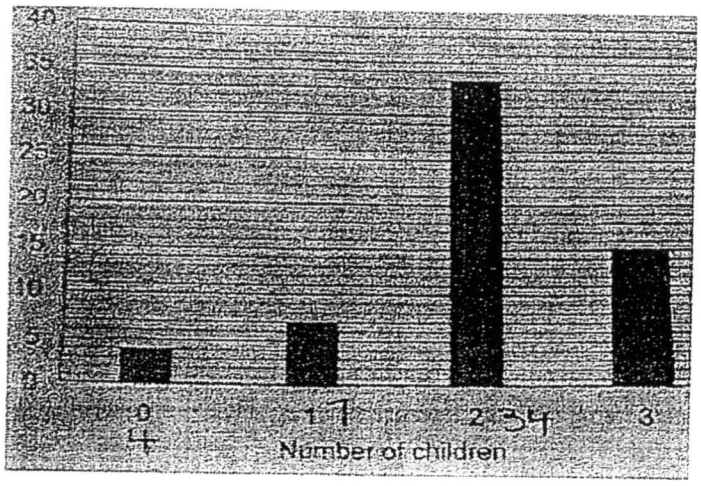
25-4=21

21potted pants=20 intervals

28.8÷20=1.44

ANS: 1.44

Q16 a)



b) 34+15=<u>49</u>

c) 1 chidren---7x1=7

2 children---34x2=68

3 children---15x3=45

Total---7+68+45=120

120÷60=<u>2</u>

Q17 a) Number of circles:

Formula: figure number x 4 - 3

9 x 4 – 3 = <u>33</u>

b) Number of tiangles:

Formula : (figure numberx2)^2

9 x 2 = 18

18 x 18 = <u>324</u>

c) Working Back

113 + 3 = 116

116 ÷ 4 = 29

Ans : Figure 29