CONTINUAL ASSESSMENT 1 – 2017
PRIMARY 6

MATHEMATICS

Paper 1

Section A: 15 Multiple Choice Questions (20 marks)

Section B: 15 Short Answer Questions (20 marks)

Total Time for Paper 1: 50 minutes

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		/ 40
	Booklet B		
Paper 2			/ 60
Total			/ 100

Name : _____ ( )

Class : 6 _____

Date : _____ Parent's Signature : _____

Section A (20marks)

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.
(20 marks)

1. $\frac{2}{5} \div \frac{2}{3} =$ _____.

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

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

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

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

2. $8 \div \frac{4}{7} =$ _____.

(1) $\frac{1}{14}$

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

(3) $4\frac{4}{7}$

(4) 14

3. 70 tens, 7 tenths and 7 thousandths is _____.

(1) 70.770

(2) 77.007

(3) 700.707

(4) 707.070

4. 40% of a number is 120. What is the number?

(1) 30

(2) 48

(3) 300

(4) 480

5. Jason's mass is $\frac{5}{8}$ of Eric's mass. What is the ratio of Eric's mass to the difference in mass between Eric and Jason?

(1) 3 : 2

(2) 5 : 2

(3) 5 : 3

(4) 8 : 3

6. In $11 \times 12 \times 13 \times 14 \times 15$, the last digit in the answer is _____.

(1) 0

(2) 2

(3) 6

(4) 4

7. Express $\frac{33}{100}$ as a percentage.

(1) 0.033%

(2) 0.33%

(3) 3.3%

(4) 33%

8. There were 200 members in a club last year. This year, there are 160 members. What is the percentage decrease in the number of members?

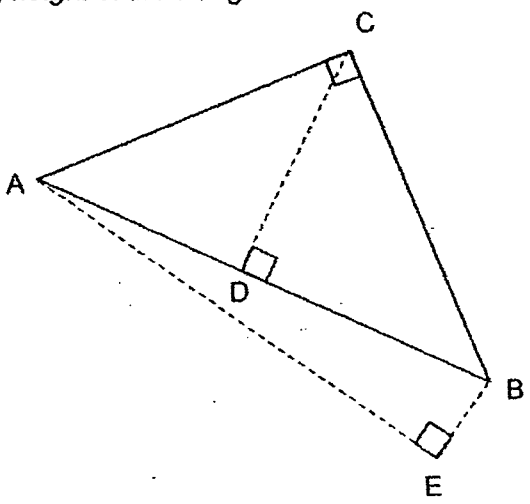
(1) 20%

(2) 25%

(3) 40%

(4) 80%

9. The figure below shows a triangle. AB is the base of the triangle. Which is the corresponding height of the triangle?



(1) CA

(2) CB

(3) CD

(4) BE

10. There are 24 girls in a class. The ratio of the number of boys to the number of girls is 3 : 4. How many boys are there in the class?

(1) 6

(2) 8

(3) 18

(4) 42

11. The ratio of the amount of money Meiling had to the amount of money Liqin had was 3 : 4. When Liqin gave Meiling $10, the ratio became 1 : 1. How much money did Meiling have at first?

(1) $30

(2) $40

(3) $60

(4) $80

12. The ratio of the number of pens to pencils to rulers in a stationery shop is 5 : 6 : 3. There are 240 more pencils than rulers. How many pens are there in the shop?

(1) 200

(2) 400

(3) 600

(4) 720

13. There are 90 girls in the chess club. The number of girls is 20% more than the number of boys. How many pupils are there in the chess club?

(1) 150

(2) 162

(3) 165

(4) 450

14. Study the pattern below. What is the 127th letter?

H A P P Y H A P P Y H .....

(1) H

(2) A

(3) P

(4) Y

15. The ratio of the amount of money Mary had to the amount of money Susan had was 2 : 3. Each of them bought a bag for $35. The ratio of the amount of money Mary had left to the amount of money Susan had left became 3 : 5. What was the total amount of money they had at first?

(1) $70

(2) $175

(3) $280

(4) $350

Section B (20 marks)

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]

Do not write in this space

16. $13 \times \frac{3}{8} = 2 \times \frac{3}{8} + \frac{3}{8} + \frac{3}{8} + \square \times \frac{3}{8}$

Ans: _____

17. The price of a bag decreased by 10% to $99. What was the original price of the bag?

Ans: $ _____

18. The number of cards Devi has is $\frac{4}{7}$ the number of cards that Elaine has. Devi has 28 cards. How many cards does Elaine have?

Ans: _____

19. The mass of a watermelon is twice the mass of a papaya. The mass of the papaya is 6 times the mass of an apple. What is the ratio of the mass of the watermelon to the mass of the apple?

Do not write in this space

Ans: _____

20. Mrs Lim has 4 children. Each of them drinks $\frac{1}{2}$ litre of milk every morning. Milk is sold in bottles of 1 litre. How many such bottles of milk does Mrs Lim need to buy in a week?

Ans: _____

21. The average age of 4 brothers is 6 years. The eldest brother is 13 years old and the youngest pair of twins is 2 years old. What is the age of the remaining brother?

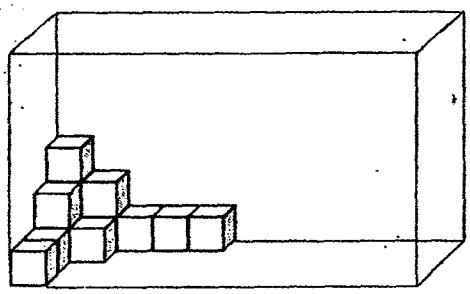
Ans: _____ years old

22. At a soccer match, the ratio of the number of children to the number of adults was 3 : 10. The ratio of the number of men to the number of women was 4 : 1. What is the ratio of the number of women to the number of children?

Do not write in this space

Ans: _____

23. The picture below shows a 10 cm by 4 cm by 6 cm box. A few 1-cm cubes are already in the box. How many **more** 1-cm cubes are needed to fill up the box?



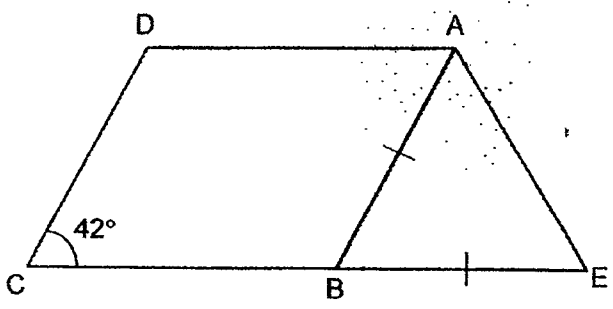
Ans: _____ 1-cm cubes

24. Peter read 30% of a book on the first day and 50% of the book on the second day. He read the last 90 pages on the third day. How many pages were there in the book?

Do not write in this space

Ans: _____ pages

25. In the figure below, ABCD is a parallelogram. ABE is an isosceles triangle. CBE is a straight line. $\angle DCB = 42°$. Find $\angle BAE$.
The figure is not drawn to scale.



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 each questions which require units, give your answers in the units stated. [10 marks]

Do not write in this space

26. 5 m of ribbon is cut into shorter pieces. Each of the shorter pieces is $\frac{2}{3}$ m long. What is the length of the remaining piece of ribbon?

(Give your answer as a fraction in the simplest form.)

Ans: _____ m

27. James had 65 Singapore and Malaysia stamps. After buying 15 more Singapore stamps, he had $\frac{3}{5}$ as many Malaysia stamps as Singapore stamps. How many Malaysia stamps did James have?

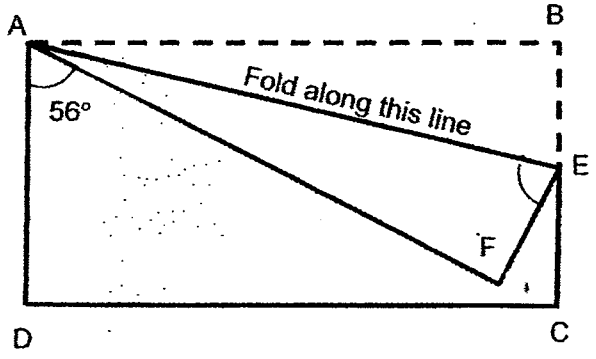
Ans : _____

28. The ratio of Mary's age to her mother's age now is 1 : 4. Five years later, the ratio of Mary's age to her mother's age will become 1 : 3. How old is Mary now?

Do not write in this space

Ans : _____ years old

29. The figure ABCD below shows a rectangular piece of paper. The paper is folded along the line AE where BE = EC. ∠DAF = 56°. Find ∠AEF. The figure is not drawn to scale.



Ans : _____ °

30. $\frac{1}{3} \times \frac{2}{4} \times \frac{3}{5} \times \frac{4}{6} \times \ldots\ldots \times \frac{97}{99} \times \frac{98}{100} = ?$

Ans: _____

END OF PAPER

CONTINUAL ASSESSMENT 1 – 2017
PRIMARY 6

MATHEMATICS

Paper 2

Total Time for Paper 2: 1 hour 40 minutes

5 Short Answer Questions (10 marks)

13 Structured / Long Answer Questions (50 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		**/ 60**

Name : _____ **(** **)**

Class : 6 _____

Date : _____ **Parent's Signature :** _____

Paper 2 (60 marks)

Questions 1 to 5 carry 2 marks each. Show your workings clearly in the space below it and write your answer in the space provided. Give your answers in the units stated.

Do not write in this space

1. $\frac{1}{3}$ of Joe's monthly savings is equal to $\frac{1}{12}$ of his monthly salary.

   What is the ratio of Joe's monthly expenditure to his monthly savings?

   (Give your answer in the simplest form.)

Ans: _____

2. A shopkeeper sold 80% of his apples in the morning. He sold 50% of the remaining apples in the afternoon. There were 18 apples left. How many apples were there at first?

Ans: _____

3. The perimeter of the room is 20m. Mr Sim wants to hang streamers one round along the whole room. Each streamer is $\frac{9}{10}$ long. How many streamers does Mr Sim need to buy?

Do not write in this space

Ans : _____

4. Jasmine bought an equal number of pens and erasers for $48. Each eraser cost $1 and each pen cost $2 more than each eraser. How much did she spend on all the erasers?

Ans: $ _____

5. Amy and Lifen made paper cranes over two days. On Monday, Amy made 15 paper cranes less than Lifen. On Tuesday, Lifen made 7 paper cranes less than Amy. At the end of the two days, Amy made $\frac{3}{7}$ of the total number of paper cranes. How many paper cranes did Lifen make?

Ans : _____

For each question from 6 to 18, **show your workings** clearly in the space below it and write your answer in the space provided. The number of marks available is shown in brackets [ ] at the end of each question or part-question.
Remember to include the units wherever possible.

Do not write in this space

6. The average mass of a group of boys was 34.5kg. Dave's mass was 40.5kg. When Dave joined the group, the new average mass was 36kg. How many boys were there in the group at first?

Ans: _____ [3]

7. In a school, 40% of the members in volleyball and 60% of the members in golf are boys. The number of members in golf is $\frac{1}{4}$ of the number of members in volleyball. There are 55 more boys in volleyball than in golf. How many members are there in volleyball?

Ans: _____ [3]

8. Alice threw her birthday party at an indoor playground. Each child was charged $25 and each adult was charged $3. Every child at the party brought 2 adults with them. Alice paid a total of $1085 for the party. How many children attended the party?

Do not write in this space

Ans: _____ [3]

9. Mr Ho bought some sweets for his pupils. If he gave each pupil 5 sweets, he would be left with 3 sweets. If he gave each pupil 3 sweets, he would be left with 59 sweets. How many pupils did Mr Ho have?

Ans: _____ [3]

10. A box contained only red and blue beads. 20% of the beads were red. 200 more red beads were put in and the number of red beads increased to 40%. How many beads were there in the box at the end?

Do not write in this space

Ans: _____ [3]

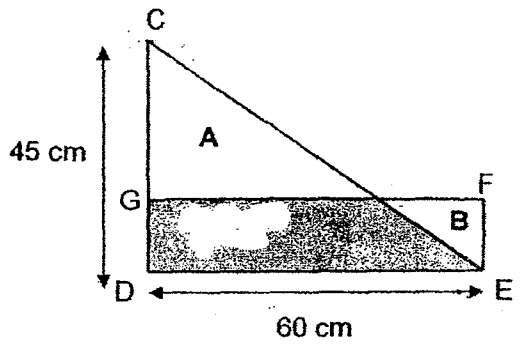
11. Kathy read $\frac{1}{3}$ of a book on Monday. She read 144 pages on Tuesday. The number of pages that she read on Tuesday was $\frac{1}{4}$ less than the number of pages that she read on Monday. How many pages were there in the book?

Do not write in this space

Ans: _____ [3]

12. In the figure shown below, not drawn to scale, consists of a triangle CDE and a rectangle DEFG. The area of the unshaded triangle A is 810 cm^2 greater than the unshaded triangle B. What is the length of EF?

Do not write in this space



Ans: _____ [4]

13. Jocelyn spent \$2 less than $\frac{1}{2}$ of her money on a pair of shoes. Then she spent \$3 less than $\frac{1}{2}$ of her remaining money on a scarf. She spent the last \$92 on a watch. How much money did Jocelyn have at first?

Do not write in this space

Ans: _____ [4]

14. The total cost of a tennis racket and a basketball is $158. The sum of 30% of the price of the tennis racket and 25% of the price of the basketball is $44. What is the price of the tennis racket?

Do not write in this space

Ans: _____ [4]

15. Ailing, Bala, Cindy and Dan shared the cost of a present equally. Bala did not bring enough money and only managed to pay for half his share. Only Ailing and Cindy helped to pay for the rest of Bala's share. The ratio of the amount of money Ailing paid to the amount of money Cindy paid was 3 : 4. The next day, Bala returned $24 to Cindy. How much did the present cost?

Do not write in this space

Ans: _____ [5]

16. Mrs Chan bought a blouse and a skirt at a discount. She spent a total of $73.30 on these two items. She spent $1.90 less on the blouse than on the skirt.

(a) How much did she spend on the blouse?

(b) The total discount given for the two items was $24.70. She was given a 30% discount for the blouse. What was the percentage discount given for the skirt?

Do not write in this space

Ans: (a) _____ [1]

(b) _____ [4]

17. A box contained only 20-cent and 50-cent coins. The ratio of the number of 20-cent coins to the number of 50-cent coins was 3 : 2. Fifteen 20-cent coins were taken out and replaced with 50-cent coins of the same value. The ratio of the number of 20-cent coins to the number of 50-cent coins became 19 : 18. How much money was there in the box?

Do not write in this space

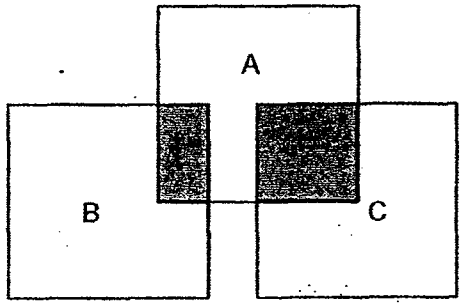
Ans: _____ [5]

18. The figure below is made up of 3 overlapping **identical** squares.

$\frac{1}{8}$ of Square B is shaded and $\frac{1}{4}$ of Square C is shaded.

(a) What fraction of Square A is shaded?

(b) Express the unshaded area as a fraction of the total area.
(Leave your answer in the simplest form.)



Do not write in this space

Ans: (a) _____ [2]

(b) _____ [3]

End-of-Paper

ANSWER KEY

YEAR : 2017
LEVEL : PRIMARY 6
SCHOOL : : NAN HUA PRIMARY
SUBJECT : : MATHEMATICS
TERM : CA1

Paper 1

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

Q16 9

Q17 $110

Q18 49 cards

Q19 12 : 1

Q20 14 bottles

Q21 7 years old

Q22 2 : 3

Q23 227 cubes

Q24 450 pages

Q25 69°

Q26 $5 \div \frac{2}{3} = \frac{5}{1} \times \frac{3}{2} = \frac{15}{2} = 7\frac{1}{2}$

$\frac{1}{2} \times \frac{2}{3} \Rightarrow \mathbf{\frac{1}{3}\ m}$

Q27 $8u = 65 + 15 \rightarrow 80$

$1u = 80 \div 8 \rightarrow 10$

$3u = 10 \times 3 \Rightarrow$ **<u>30 stamps</u>**

Q28

Mary	:	Mother	:	Diff
1	:	4	:	3
2	:	8	:	6

<u>5 years later</u>

Mary	:	Mother	:	Diff
1	:	3	:	2
3	:	9	:	6

$5 \rightarrow 1u$

$5 \times 2 \Rightarrow$ **<u>10 years old</u>**

Q29 $90 - 56 \rightarrow 34$

$34 \div 2 \rightarrow 17$

$180 - 17 - 90 \Rightarrow$ **<u>73°</u>**

Q30 $\frac{1}{4950}$

<u>Paper 2</u>

Q1

Saving		Salary
$\frac{1}{3}$	=	$\frac{1}{12}$
$\frac{3}{9}$	=	$\frac{3}{36}$

$36 - 9 \rightarrow 27$

$27 : 9$

$9 : 3$

<u>3 : 1</u>

Q2 $\frac{1}{2} \times \frac{1}{5} = \frac{1}{10}$

$1u \rightarrow 18$

$18 \times 10 \Rightarrow$ 180 apples

Q3 $20 \div \frac{9}{10} \rightarrow 22\frac{2}{9}$

$22 + 1 \Rightarrow$ 23 streamers

Q4 1 set $\rightarrow \$3 + \$1 = \$4$

$\$48 \div \$4 = 12$ sets

$12 \times \$1 \Rightarrow$ $12

Q5 $4u + 28 + 4p = \frac{12}{7}$

$3u + 45 + 3p = \frac{12}{7}$

$1u + 1p = 45 - 28 = 17$

$17 + 15 \Rightarrow$ 32 paper cranes

Q6 $36 - 34.5 = 1.5$

$40.5 - 36 = 4.5$

$4.5 \div 1.5 \Rightarrow$ 3 boys

Q7

Volleyball	Golf
B : G : total	B : G : total
2 : 3 : 5	3 : 2 : 5
8 : 12 : 20	
Diff in boys $\rightarrow$	$8u - 3u = 5u$
	$5u = 55$
	$1u = 55 \div 5 \rightarrow 11$
	$20u = 11 \times 20 \Rightarrow$ 220 members

Q8 1 group $\rightarrow$ 1c + 2d

1 group $\rightarrow 25 + 3 + 3 = 31$

No. of groups $\rightarrow 1085 \div 31 = 35$

No. of children $\rightarrow 35 \times 1 \Rightarrow$ 35

Q9 $5 - 3 = 2$

$59 - 3 = 56$

No. of pupils $\rightarrow 56 \div 2 \Rightarrow$ <u>28 pupils</u>

Q10

<u>Before</u>	<u>After</u>
1 : 4	2 : 3
3 : 12	8 : 12

$5u = 200$

$20u \rightarrow 200 \times 4 \Rightarrow$ <u>800 beads</u>

Q11 Mon $\rightarrow \frac{1}{3} = \frac{4}{12}$

Tue $\rightarrow$ 75% of $\frac{1}{3}$

$= \frac{3}{4} \times \frac{1}{3}$

$= \frac{1}{4} \rightarrow \frac{3}{12}$

$\frac{3}{12} \rightarrow 144$ pages

$\frac{12}{12} \rightarrow 12u = 144 \times 4 \Rightarrow$ <u>576 pages</u>

Q12 Triangle A $\rightarrow$ $\frac{1}{2} \times 45 \times 60 = 1350$

$1350 - 810 = 540$

$540 \div 60 \Rightarrow$ <u>9 cm</u>

Q13 $92 - 3 = 89$

$89 \times 2 = 178$

$178 - 2 = 176$

$176 \times 2 \Rightarrow$ <u>$352</u>

Q14 $\frac{10}{10}$ T + $\frac{4}{4}$ B = \$158

$\frac{12}{10}$ T + $\frac{4}{4}$ B = \$176

$\frac{2}{10}$ of T = 176 – 158

$\frac{1}{10}$ of T = 18 ÷ 2 → 9

$\frac{10}{10}$ of T = 9 x 10 ⇒ \$<u>90</u>

Q15 6u = \$24

1u = \$4

56u = \$4 x 56 ⇒ <u>\$224</u>

Q16 **(a)** B + S → \$73.30

$\frac{73.30 - 1.90}{2}$ ⇒ <u>\$35.70</u>

(b) Actual cost (before discount) → 73.30 + 24.70 = \$98

Skirt (after discount) → 73.30 – 35.70 = \$37.60

Blouse (before discount) → $\frac{35.70}{70}$ x 100 = \$51

Skirt → (before discount) → 98 – 51 = \$47

→ 47 – 37.60 = \$9.40

Skirt % discount → $\frac{9.40}{47}$ x 100 ⇒ <u>20%</u>

Q17 54p – 18 → 38p + 30

54p – 38p → 30 + 18

16p → 48

1p → 3

19p = 19 x 3 → 57

57 x 0.20 → 11.40

18p = 18 x 3 → 54

54 x 0.50 → 27

27 + 11.40 ⇒ <u>\$38.40</u>

Q18 **(a)** $\frac{3}{8}$

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

End