NANYANG PRIMARY SCHOOL

FIRST CONTINUAL EXAMINATION
2014
PRIMARY 6
MATHEMATICS
PAPER 1

DURATION: 50 MINUTES

Booklet A	/ 20
Booklet B	/ 20

Paper 1 Total:
/ 40

Name: _____ (   )

Class: Primary 6 (   )

Date: _____

Parent's Signature: _____

Any query on marks awarded should be raised by <u>13 March 2014</u>. We seek your understanding in this matter as any delay in the confirmation of marks will lead to delays in the generation of results.

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)

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1   Simplify $11a + 15 - 2a - 8$.

(1) $5a + 7$

(2) $5a + 23$

(3) $9a + 7$

(4) $9a + 23$

2   What is the value of $5200 \div 20$?

(1)   26

(2)   260

(3)   2600

(4)   26 000

3   Find the value of $26 - 3 \times 2 + (8 + 8 \div 2)$.

(1)   28

(2)   32

(3)   54

(4)   58

4   Which of the following fractions are the equivalent fractions of $\frac{4}{12}$?

$$\frac{1}{3}, \quad \frac{1}{4}, \quad \frac{2}{8}, \quad \frac{3}{9}$$

(1) $\frac{1}{3}$ and $\frac{3}{9}$

(2) $\frac{1}{3}$ and $\frac{2}{8}$

(3) $\frac{1}{4}$ and $\frac{3}{9}$

(4) $\frac{1}{4}$ and $\frac{2}{8}$

5 What number is 4.63 less than 6.96?

    (1)   2.06

    (2)   2.33

    (3)   11.32

    (4)   11.59

6 What percentage of 2 kg is 400 g?

    (1)   20%

    (2)   50%

    (3)   200%

    (4)   500%

7   Find the value of $\dfrac{5}{9} - \dfrac{1}{3}$

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

(2) $\dfrac{4}{9}$

(3) $\dfrac{4}{6}$

(4) $\dfrac{8}{9}$

8   The total length of 30 rods is 6 m. What is the average length of the rods?

(1) 0.2 cm

(2) 2 cm

(3) 5 cm

(4) 20 cm

9 Find the value of $\dfrac{12}{7} \times 21$

    (1)   35

    (2)   36

    (3)   3

    (4)   4

10 Mary and John were given $\dfrac{5}{6}$ of a pizza. They shared the pizza equally. What fraction of the pizza did each of them receive?

    (1) $\dfrac{5}{12}$

    (2) $\dfrac{10}{12}$

    (3) $\dfrac{10}{6}$

    (4) $\dfrac{12}{5}$

11 What is the missing number in the box below?

$$0.625 \times 100 = \boxed{} \div 10$$

(1) 6.25

(2) 62.5

(3) 625

(4) 6250

12 The number of children increased by 15 to 35 at a party. What was the percentage increase in the number of children?

(1) 30%

(2) $42\frac{6}{7}\%$

(3) $57\frac{1}{7}\%$

(4) 75%

13   The dimensions of a rectangular yard are $4\frac{2}{3}$ m and 6 m. What is the area of the yard?

(1) $10\frac{2}{3}$ m^2

(2)   16 m^2

(3) $24\frac{2}{3}$ m^2

(4)   28 m^2

14   The average age of Elvin's friends was 11 years old. Elvin was 7 years old. After Elvin joined the group, the average age became 10 years old. How many children were there in the group after Elvin joined in?

(1)   5

(2)   6

(3)   3

(4)   4

15   Felix bought 5 sacks of flour for his bakery. Each sack of flour was
      25 kg. He used 73 kg and packed the remaining flour into 4 smaller
      packets of equal mass. What was the mass of each smaller packet of
      flour?

      (1)   13 kg

      (2)   38 kg

      (3)   48 kg

      (4)   52 kg

Name: _____('   )   Class: Pr 6 (   )

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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)

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16   Find the value of $18 + 5b - 2b - 4$ when $b = 3$.

Ans: _____

---

17   What is the product of 67 and 8?

Ans: _____

---

18 Find the value of $\dfrac{3}{7} \times \dfrac{7}{12}$.

Express your answer as a fraction in its simplest form.

Ans: _____

---

19 Express 30 tens, 62 hundredths and 8 thousandths as a decimal.

Ans: _____

---

20 Round off 23 890 to the nearest thousand.

Ans: _____

21   Find the value of $4 \div \frac{6}{7}$.

Leave your answer as a mixed number in its simplest form.

Ans: _____

---

22   Given that 35 × 9 = 315, what is the missing number in the box below?

$$35 \times \boxed{\ ?\ } = 31.5$$

Ans: _____

---

23   Mr Yan walked 632 m from his house to Town A to visit a friend. He then walked back 314 m towards his house along the same route to Tella Supermarket. What was the distance between Mr Yan's house and Tella Supermarket?

Ans: _____ m

11

24   Eva had $150 at first.   She spent 30% of her money on a wallet.   How much did she spend?

Ans: $_____

---

25   A tank was 70% full of water.   When 15 *l* of the water leaked out, there were 34 *l* of water left in the tank.   What was the capacity of the tank?

Ans: _____ *l*

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)

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26 After selling 350 kg of rice, Mr Tan had $\frac{3}{4}$ of the rice left. He then

gave away the remaining rice equally to 5 charitable organisations.
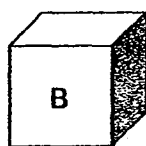
How much rice did each organisation receive?

Ans: _____ kg

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27 Xian Zhong saved 40% of his salary every month. When Xian Zhong's salary was reduced by 10%, his savings became $360. What was his salary at first?
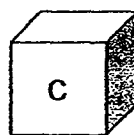
Ans: $ _____

28 The average mass of the 3 boxes shown below is $\frac{9}{20}$ kg. Given that the masses of Boxes A and B are $\frac{1}{4}$ kg and 0.6 kg, what is the mass of Box C?

$\frac{1}{4}$ kg   0.6 kg   ? kg

Ans: _____ kg

29   There were 25c red marbles in a container. $\frac{1}{5}$ of the red marbles

were taken out. 15 blue marbles were then placed into the container.
How many marbles were there in the container in the end?   Express
your answer in terms of c.

Ans: _____

---

30   Every 2nd customer is given a toy and every 4th customer is given a free
ice-cream while every 9th customer is given a free apple pie at the
newly-opened Yummy Burger.   Kylar received all the 3 free gifts just by
visiting the restaurant once.   Given that he was among the first 50
customers, what customer number was Kylar?

Ans: _____
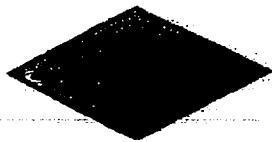
NANYANG PRIMARY SCHOOL

FIRST CONTINUAL EXAMINATION 2014
PRIMARY 6
MATHEMATICS
PAPER 2

DURATION: 1 HOUR 40 MINUTES

Paper 2 Total	/ 60

GRAND TOTAL	/ 100

Name: _____ (   )

Class: Primary 6 (   )

Date: _____

Parent's Signature: _____

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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)

1   Mrs Verlu's annual income is $26 400.   She puts 20% of her annual income in a bank which pays 4% interest per year.   How much interest will Mrs Verlu receive at the end of the year?

Ans: $_____

2   Chef Lee bought $6\frac{1}{4}$ kg of fish.   He used $2\frac{5}{8}$ kg of it to cook curry fish.   He then bought another $2\frac{3}{5}$ kg of fish.   What was the mass of the fish he had in the end?

Ans: _____ kg

17

3   4 cups and 3 bowls cost $12. 3 cups and 1 bowl cost $7. Find the cost of 1 cup.

Ans: $ _____

---

4   The average of seven numbers is 56. 1 is added to the first number, 2 is added to the second number, 3 is added to the third number and so on, up to the seventh number. Find the new average.

Ans: _____

5   Brienna wants to mark some crosses on the outline of a circle as shown in the diagram below. The crosses are evenly spaced out and the 5th cross is directly opposite the 14th cross. Find the number of crosses that Brienna can mark on the outline of the circle.

Ans: _____

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   A soft plastic sheet with a thickness of 0.24 cm is folded so that it is twice as thick after each fold.

(a) How thick is the plastic sheet after 2 folds?

(b) What is the greatest number of folds needed for the thickness of the plastic sheet to be not more than 16 cm thick?

Ans: (a) _____ [1]

        (b) _____ [2]

7   A delivery company charges a fixed amount of $28 for delivery of any parcel weighing not more than 10 kg.   It charges an extra amount of p cents for every extra kilogram the parcel weighs.   Mrs Pillay wants to deliver a parcel of 8 kg and a parcel of 12 kg.   How much does she have to pay the delivery company in total in terms of p?   Express your answer in dollars.

Ans: _____ [3]

8   There was $\dfrac{9}{10}$ l of alcohol in a beaker. $\dfrac{2}{3}$ of it was used in an experiment. The remaining volume of the alcohol was poured into 6 test tubes each of equal volume.

(a)   What was the volume of alcohol used in the experiment?

(b)   What was the volume of alcohol in each test tube?
Express your answer in ml.

Ans: (a) _____ [1]

(b) _____ [2]

9   Mr Osman bought 30 watches.   Given a discount of 25%, he paid for
     20 female watches at $120 each and 10 male watches at $90 each.
     How much did the watches cost before the discount?

                                    Ans: _____ [3]

_____

10   Lendy paid $364 for some pairs of trousers and shirts.   A shirt cost $28
     and a pair of trousers cost 3 times as much as a shirt.   He bought 5
     more shirts than trousers. How many pairs of trousers did he buy?

                                    Ans: _____ [3]

_____

11   There were 420 visitors at the Arts Museum. $\frac{2}{7}$ of them were adults.

The rest were children. $\frac{3}{8}$ of the adults were men and $\frac{2}{5}$ of the

children were girls.

(a)   How many women were there at the museum?

(b)   How many more boys than adults were there?

Ans: (a) _____ [2]

(b) _____ [2]

12   Bingwei has some coins in his savings box. There are 15 fewer
     50-cent coins than 20-cent coins. The total value of the coins is
     $21.90. Find the total number of coins Bingwei has in his savings box.

Ans: _____ · [4]

13   There were 36 tulips, 48 roses and 60 carnations in a shop at first. When 39 more flowers were added, the number of roses was increased by 25% and the number of carnations was increased by 30%. What was the percentage increase in the number of tulips?

Ans: _____ [4]

14   Mrs Lucien started her journey with 22.8 l of petrol in the tank. After travelling for a distance, she found that there was only 3.8 l of petrol left. She refilled $48 worth of petrol at 80¢ per litre. At the end of her journey, 10.8 l of petrol was left in the tank. 0.2 l of petrol was needed for every 1 km. What was the total distance Mrs Lucien covered?

Ans: _____ [4]

15 Study the pattern below.

$$1 + 1$$

$$1 + 2 + 2 + 1$$

$$1 + 2 + 3 + 3 + 2 + 1$$

$$1 + (\;) + (\;) + (\;) + (\;) + (\;) + (\;) + 1$$

(a) Complete the pattern of the 4th line by writing your answers in the brackets provided above. [1]

(b) What is the sum of numbers in the 5th line?

(c) Which line has a sum of 110?

Ans: (b) _____ [2]

(c) _____ [2]

16   Tom's allowance is $15 more than Jack's allowance each week.   Each
      of them spends $12 per week and saves the rest.   When Tom saves
      $161, Jack saves $56.   How much is Tom's weekly allowance?

Ans: _____ [5]

17. The mass of the flour in Sack A was $\frac{2}{5}$ the mass of the flour in Sack B.

After adding 200 g of flour into Sack A and 2 kg 400 g of flour into Sack B, the mass of the flour in Sack A was $\frac{1}{5}$ the mass of flour in Sack B.

(a) What was the mass of the flour in Sack A at first?

(b) What was the mass of the flour in Sack B in the end?
Express your answer in kg and g.

Ans: (a) _____ [3]

(b) _____ [2]

18 Benny, Hamid and Anbu decided to share and buy a present for their friend. Benny agreed to contribute 30% of the cost of the present while Hamid would contribute 40% of the remaining amount. The balance would be paid by Anbu. The cost of the present they intended to buy increased by 25%. As a result, Benny had to pay $45 for his share.

(a) What was the cost of the present before the increase?

(b) How much did Anbu have to pay in the end?

Ans: (a) _____ [3]

        (b) _____ [2]

END OF PAPER

School: NANYANG PRIMARY SCHOOL
Subject: PRIMARY 6 MATHEMATICS
Term: CA1

Paper 1

1)	3	6)	1	11)	3
2)	2	7)	1	12)	4
3)	2	8)	4	13)	4
4)	1	9)	2	14)	4
5)	2	10)	1	15)	1

16. 23

17. 536

18. $\frac{1}{4}$

19. 300.628

20. 24000

21. $4\frac{2}{3}$

22. 0.9

23. 318

24. 45

25. 70

26. $350 \times 3 = 1050$
    $1050 \div 5 = \textbf{210}$

27. Last time → $100\% \times \frac{4}{10} = 40\%$
    Now → $90\% \times \frac{4}{10} = 36\% →$ \$360
    $1\% →$ \$10
    $100\% →$ **\$1000**

28. $450 \times 3 = 1350$
    $1350 - 250 - 600 = 500g = \textbf{0.5kg}$

29. $25c \times \frac{1}{5} = 5c$
    $25c - 5c = 20c$
    $20c + 15 = \textbf{20c + 15}$

30. Multiple of 2: 2, 4, 6, 8, ..., 36
    Multiple of 4: 4, 8, 12, 16, ..., 36
    Multiple of 9: 9, 18, 27, **36**

Paper 2

1. $\frac{20}{100}$ x \$26400 = \$5280
   $\frac{4}{100}$ x \$5280 = **\$211.20**

2. $6\frac{1}{4} - 2\frac{5}{8} + 2\frac{3}{5} = \mathbf{6\frac{9}{40}}$

3. 4c + 3b → \$12
   3c + 1b → \$7 (x3)
   9c + 3b → \$21
   4c + 3b → \$12
   \$21 - \$12 = \$9
   5c → \$9
   1c → **\$1.80**

4. 56 x 7 = 392
   1 + 2 + 3 + 4 + 5 + 6 + 7 = 28
   392 + 28 = 420
   420 ÷ 7 = **60**

5. 8 + 8 + 2 = **18**

6. (a) 1 fold → 0.24 x 2 = 0.48
       2 folds → 0.48 x 2 = **0.96cm**
   (b) 3 folds → 0.96 x 2 = 1.92
       4 folds → 1.92 x 2 = 3.84
       5 folds → 3.84 x 2 = 7.68
       6 folds → 7.68 x 2 = 15.36

7. 1 extra kg → p cents = $\$\frac{p}{100}$
   8kg → \$28
   12kg → \$28 + $\$\frac{2p}{100}$
   \$28 + \$28 + $\frac{2p}{100}$ = **\$(56 + $\frac{2p}{100}$)**

8. (a) $\frac{9}{10}l$ = 900ml
       900 x $\frac{2}{3}$ = **600ml**
   (b) (900 − 600) ÷ 6 = **50ml**

9. 120 x 20 = 2400
   90 x 10 = 900
   2400 + 900 = 3300
   3300 ÷ 75 x 100 = **\$4400**

10. S → \$28
    T → \$84
    \$364 − (\$28 x 5) = \$224

$28 + $84 = $112
$224 ÷ $112 = **2**

11. (a) Women → 420 x $^2/_7$ = 120
                   120 x $^5/_8$ = **75**
    (b) Adults → 420 x $^2/_7$ = 120
        Boys → 420 x $^5/_7$ = 300
        300 x $^3/_5$ = 180 (Boys)
        180 − 120 = **60**

12. 20 cents x 15 = 300 cents
    $21.90 = 2190 cents
    2190 cents − 300 cents = 1890 cents
    50 cents + 20 cents = 70 cents
    1890 cents ÷ 70 cents = 27
    (27 x 2) + 15 = **69**

13. T → 36
    100% → 125%
    R → 48 → 60
    100% → 130%
    C → 60 → 78
    36 + 48 + 60 = 144
    144 + 39 = 183
    183 − 60 − 78 = 45
    45 − 36 = 9
    $^9/_{36}$ → **25%**

14. 22.8 − 3.8 = 19
    $48 ÷ 80 cents = 60
    63.8l (after refill)
    63.8 − 10.8 = 53
    53 + 19 = 72
    72 ÷ 0.2 = **360km**

15. (a) **2, 3, 4, 4, 3, 2**
    (b) Line 5 → 1 + 2 + 3 + 4 + 5 + 5 + 4 + 3 + 2 + 1 = **30**
    (c) 110 ÷ 2 = 55
        55 → 1 + 2 + 3 + 4 + 5 + 6 + 7 + 8 + 9 + **10**

16. 161 − 56 = $105
    $105 ÷ 15 = 7 weeks of saving
    $56 ÷ 7 = $8
    $8 + $12 + $15 = **$35**

17. 10u + 1000 → 5u + 2400
    5u → 1400
    1u → 280
    2u → 560
    5u → 1400

1400 + 2400 = 3800g = **3kg 800g**

18. B → 30%
    H → 28%
    A → 42%
    125%
    B → 37.5%
    H → 35%
    A → 52.5%
    (a) $45 ÷ 37.5 = $1.20 (1%)
        1% → $1.20
        100% → **$120**
    (b) 52.5% → **$63**