Score／ 600

## Student ID．

Kindergarten（K2）Set 1

Part 1．Multiple Choice（Each question 10 marks．Total 100 marks）
（元：dollars）
（ ） 1

（a rs
（2）
$\cos ^{2} 3=(1) 5$
（2） 6
（3） 7


（2） 6
（3） 7

$\eta=102$

（3） 4
（3） 7
$(\quad) \cdot$ How many more than ＇fy
？（1） 5
（2） 2
（3） 3 tortoises．
（ ）© $\underset{\sim=(1) 5}{ }$
（2） 6
（3） 7

（1）
（2）

（3）

（ ）${ }^{-}$ $+(\quad)=\square,(\quad)=(1) \square$
（2）

（3）


（ ）（1）
 How many fish in total？
（1） 5
（2） 2
（3） 3 fish．

Part 2．Fill in the blanks（Each question 10 marks．Total 100 marks）
（1）Which one is longest？check

（2）Which shape is after opening？check



Part 4．Applied questions（Each question 10 marks．Total 100 marks）

## （1）Calculate the amount（ 元：dollars）


（2）Match the following（connect the same prices）


Part 1．Multiple Choice（Each question 10 marks．Total 50 marks）
100
（1）

8
（3）

（ ） $7-\square+4=10, \square=(1) 1$（2） 2 （3） 3
（ ）3（ 3 （3） 3 （3） （ ）4 20， （ ） $\boldsymbol{5}$ ，are there，come in，and runs away，how many are left？（1）（2） 2 crabs．

Part 2．Fill in the blanks（Each question 10 marks．Total 50 marks）How many building blocks are there？


Part 3．Calculations（Each question 10 marks．Total 50 marks）


Part 4．Applied Questions（Each question 10 marks．Total 50 marks） Which one is $\square$ ？Check in（）


4 ，How many tets in total？ $\qquad$ feet
5 There are 6 and

Thaipei Mayor Cup International Mathematics And Mental Arithmetic Competition 2017
Score／ 600
Kindergarten（K3）Set 1
$\qquad$ Time Allowed ：15 minutes
Part 1．Multiple Choice（Each question 10 marks．Total 100 marks）
（元 ：dollars）

（2）

（2）
（3）

（4）

（4）

（4）An
（2） 8 日
（3）$日$


昌

（3）（4）

（2） 8
（3） 9
（4） 10
$(\quad)^{6}$

（2） 8
（3） 9
（4） 10
（ ）（3）
（1） $\mid 2$
（2） 8
（3） 9
（4） 10
（ ） $10(5)\left(\frac{1}{2}\right)\left(\frac{1}{2}-\left(\frac{5}{2}\right)\left(\frac{1}{2}\right)+\left(\frac{1}{2}\right)=(1) 25\right.$
（2） 12
（3） 13
（4） 14 dollars．
（ ） 9 How much is $13(1)(1)$ less than 10$)$ ？
（1）।
（2） 2 （3） 3
（4） 19 dollars．
（ ）（1） $20 \rightarrow 22 \rightarrow \square \rightarrow 26 \rightarrow 28$ ， $\square$ $\square=$ （1） 21
（2） 25
（3） 23
（4） 24

Part 2．Fill in the blanks（Each question 10 marks．Total 100 marks）
（1）Which one is heaviest？check

（2）Which shape is missing in front of the graphic？check

$\square$

$\theta$


©
4
$8+2=$

$4+6=$


$$
5+\ldots=16
$$

5

|  |  |
| :---: | :---: |
|  |  |
| + | $11=20$ |

Part 4. Applied questions (Each question 10 marks. Total 100 marks)
(1) Match the following (connect the same prices)

(2) Match the following (connect the same times)


## Part 1．Multiple Choice（Each question 10 marks．Total 50 marks）

（ ） 1
$\square+(\quad)=\square$
，（ ）＝（1）$\square$
（2）$\square$
（3）$\square$
（4）$\square$
（ ）
，How many wheels in total？（1）｜
（2） 12
（3） 13
（4） 9 wheels．
$(\mathrm{m}$（10）（10）（5）（5）（1） 52
（2） 42
（3） 37
（4） 47 dollars．
$(\quad) 45 \rightarrow 20 \rightarrow \square \rightarrow 10$
$(\quad) \quad 12+7 \square 5=14$,
$\square=$（1） 18
（2） 12
（3） 15
（4） 17
$\square=(1)+$
（2）-
（3）$=$
（4）$\times$

Part 2．Fill in the blanks（Each question 10 marks．Total 50 marks）The front graphics in the right rotated 90 degrees，Become to which one？Check
$\checkmark$


Part 3．Calculations（Each question 10 marks．Total 50 marks）


Part 4．Applied Questions（Each question 10 marks．Total 50 marks）Which one is $\square$ ？Check $\boldsymbol{\square}$（）

（2）46，35，27，12，Odd number is $\qquad$ and $\qquad$ ．
 $\qquad$ fingers
（4）Man＋M How many feets in total？
$\qquad$
（4） 19 亿．
（4） 34.
（ ）A rope is folded in half．The length will be（1）longer

（1）

（1）

（2）shorter
（3）unchanged．
（3）
（4） ） $5 \quad 16-\square=5$ ，The equation for $\square$ should be
（1） $16+5$
（2）15－6
（3） $5+16$
（4）16－5．
（ ） $\boldsymbol{C} \quad A+78=87+B, A$ and $B$ which one is larger？（1）$A$
（2）$B$
（3）Same．
（ $) 757+17$ ，the answer＇s ones place is（1） 7 （2） 6 （3） 54 （4） 4
（ ）${ }^{-3}$ When subtracting the one＇s place isn＇t enough，you borrow from the
（1）ones place
（2）tens place
（3）hundreds place
（4）thousands place．
（ ）Used 50 dollars to replace some small change．Which one is correct？ （1）（10）（5）（5）（2）（10）（10）（1）（10）（10）（10）（5）（10）（10）． 5 （1）
（ ）（1）Which of the following time periods is the longest？（Only through one day）
（1）Morning to night
（2）Morning to noon
（3）Noon to afternoon
（4）Afternoon to night．

## Part 2．Fill in the blanks（Each question 10 marks．Total 100 marks）

（1）7：00，once the short hand makes one circle it will be $\qquad$ o＇clock．
（2）Looking from any direction，a Sphere from one side is in the shape of $\qquad$ ．
（3）There are $\qquad$ numbers that are greater than 34 and less than 56．（Nor including 56 and 34）
（4）At least $\qquad$ tens need to be added together to be greater than 79.

Connect the dots（connect the problem to the correct equation）
5


| Record of sold fruit | Fruits | Tallies for fruits sold |
| :---: | :---: | :---: |
|  | Apple | 正正正 |
|  | Banana | 正正正正正正下 |
|  | Pineapple | 正正正正正T |
|  | orange | 正正正正正正正正平 |

（3）The most sold is $\qquad$ were sold．
© The least sold is $\qquad$ ， $\qquad$ were sold．
（1）How much more bananas than Pineapples？

## Part 3．Calculations（Each question 10 marks．Total 100 marks）

（1） $79-50=$
（2） $10+30+50=$

（3） $68+14=$ $\qquad$ （4） | 96 | 41 | 80 |
| ---: | ---: | ---: |
| -35 | +24 | -77 |
|  |  |  |

Please connect the dots to from groups of $\$ 100$


Part 4．Applied questions（Each question 10 marks．Total 100 marks）
）（1）Which clock shows the time between 5 o＇clock and 6 o＇clock？

）（2）
8 oranges can fit in 1 bag， 33 oranges can fill how many bags？How much will remain？
） 3
Martin lives on the 12 floor．
He takes an elevator to reach the $1^{\text {st }}$ floor．How many floors did he past to reach the $1^{\text {st }}$ floor？

）4 Right now it is $6: 30 \mathrm{pm}$ ，What time is it an hour and a half before 6：30pm？
$1 \Theta$
A book shelf has 6 books Melody added 7 more books and Helen added 8 books to the shelf．How many books are on the shelf？
）$\Theta$ How many $\Theta$ are used below？

）（7）Helen has 30 dollars．Is it enough to buy a fries that cost 35 dollars？
）（3）Martin is Number 21 in a line to buy movie tickets．Melody is 3 people in front of Martin． What number is Melody？

）${ }^{9}$ A toy plane costs 98 dollars． Daniel has 45 dollars．At least how much more （10） does he need in order to buy the toy？
）（1）Wang＇s waist is 31 paperclips long．If a paperclip＇s length is 2 centimeter，How wide is Wang＇s waist？

## Primary 1 Expert Level Gifted Math Challenging Questions

## Part 1．Multiple Choice（Each question 10 marks．Total 50 marks）

（ ）1 65 元 can be exchanged for how many
（5）？
（1） 11
（2） 15
（3） 13
（4） 14.
）（2）Which is not a completed flat shape？
（1）$\square$
（2）
（3） 4
（4）

# 78 to 86 ？ 

（1） 0
（2） 7
（3） 8
（3） 8 （4） 14 ．

（ ）As shown．$A$ and $B$ which one is larger？

Part 2．Fill in the blanks（Each question 10 marks．Total 50 marks）
（1）A number that has 1 both in the ten＇s place and one＇s place and 100 have a difference of $\qquad$ ＿．
（2）Martin＇s hand，when open is 15 cm long． Using it to measure the table，the length of the table is 6 times the length of his hand． The length of the table is $\qquad$ cm ．

（3）The longest is $\qquad$ ， $\qquad$ cm long．
（4）The shortest is $\qquad$ ， $\qquad$ cm long．
（5）Difference between $A$ and $C$ is $\qquad$ cm ．

## Part 3．Calculations（Each question 10 marks．Total 50 marks）

（1）Ming＇s steps are 5 cm apart，and he takes 6 steps．How much centimeter did he walk？
$\qquad$ cm
（2）You can have $\qquad$ tens．Without being bigger than 85.

Count（Put the right numbers in the（ ））


Part 4．Applied Questions（Each question 10 marks．Total 50 marks）

| （ | ）1 | After a test the teaches made a chart．How many people took the fest？ |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | ${ }^{\text {Problem }}$ | Problem | Problem |
|  |  | Correct | \％ | 27 | 23 |
|  |  | Wrong | 4 | \％ | 5 |
| （ | ）2 | 57 | 70 | 2 ，are | digit |
|  |  | cards．What is the difference between the bigger 2－digit and the smaller 2－digit number that you can arrange with the cards？ |  |  |  |

）（3）Dan has 9
（10），He buys a hamburger for 45 dollars and a coke for 25 dollars．How many（10）does Dan have left？
）（4）A package of green tea costs 39 dollars．A pack of flower tea costs 8 more dollars．If you buy one pack of each，How much would you spend？
） 9
John＇s birthday is on August $31^{\text {th }}$ ，and his brother＇s was 32 days before him．What day is his brother＇s birthday？
（1） 45
（2） 42
（3） 43
（4） 44.
（ ）（1）＂48 apples，every 6 loaded into a box，a total of how many boxes can be loaded？＂Which of the following equations can be used to calculate？（1）48＋6＝（）（2）48－6＝（）（3）6x（）＝48（4）6＋（）＝48．

## Part 2．Fill in the blanks（Each question 10 marks．Total 100 marks）

（1）
 has $\qquad$ corners and $\qquad$ sides．
（2）$A \times 5=30,85-A=$
（3）$A \times B=C$ ，The multiplier is $\qquad$ ．
（4）The seven－fourths denominator is $\qquad$
（5）From 500 up to 50 is $\qquad$ ． read as
©

| $100_{\text {元 }} 100_{\text {元 }} 100_{\text {元 }} 100_{\pi}$ ，plus |
| :--- | :--- | :--- |
| $500_{\text {元 }} 100_{\text {元 }}$ is | dollars．

（7）A triangle with a cut corner might become what shape？

Connect the dots（connect both sides of the same meaning）
B


Part 3．Calculations（Each question 10 marks．Total 100 marks）

（G）With a price of $A$ ，you can buy $\qquad$ B．
（7）With a price of $A$ ，you can buy $\qquad$ D．
（3）With a price of $C$ ，you can buy $\qquad$ D．
© With a price of $A$ and $C$ ，you can buy B．
（1）All bought one，a total of $\qquad$ dollars．

Part 4．Applied questions（Each question 10 marks．Total 100 marks）
（ ）© A truck has six wheels， 9 truck has a total of several wheels？
）（2）
A watermelon can be cut into 16 pieces，each people assigned to 2 pieces，how many people could be assigned to？
）（3）Make a cake must to use 5 eggs ，how many cakes can be made with 25 eggs？

）4 052505 are digit cards． What is the minimum 3－digit number that you can be arranged with the cards？

$$
15
$$

Buy a toy car paid a and $2100_{\text {元，give change } 12}$ dollars，how much money is this toy car？
）（5 A pack of candy has 58 candies， $\frac{1}{2}$ pack has how many candies？
）（7）After stacking the three boxes ，the new box has how many groups with the same plane surface？

）$\Theta$ Younger brother has 750 dollars，want to buy a toy airplane 988 dollars，he is not enough how much money？
）$\Theta$ As the clock shown，if minute hand moves 8 large intervals and 3 small intervals，what time is it？

（1）There are two ropes $A$ and $B$ ， rope $A$ length is 1 m 4 cm ，rope $B$ is 8 cm shorter than rope $A$ ， how many meters long are the two ropes length？

## Primary 2 Expert Level Gifted Math Challenging Questions

## Part 1．Multiple Choice（Each question 10 marks．Total 50 marks）

（ ）147＋$\square$－369＝36，$\square=(1) 211$
（2） 258
（3） 308
（4） 479 ．
（ ）2 What＇s the difference between $0 \times 5$ and $0 \times 7$ ？（1） 1
（2） 5
（3） 7 （4） 0 ．
（ ） $3 \frac{4}{3}$ and $\frac{5}{2}$ can be called（1）proper fraction（2）improper fraction（3）mixed fraction．
（ ）4 There are 60 small intervals on the clock face，every 5 small intervals is a large interval， the clock face has how many large intervals？
（1） 12
（2） 24
（3） 15 （4） 4 large intervals．
（ ） 9 There is a 3－digit number greater than 615 ，but less than 888 ，it is most likely which of the following？（1） 515 （2） 612 （3） 730 （4） 889.

Part 2．Fill in the blanks（Each question 10 marks．Total 50 marks）
（1）$\frac{\Delta \Delta}{\Delta} \Delta$ is $\qquad$ of $\frac{\Delta \Delta \Delta \Delta}{\Delta \Delta \Delta \Delta}$ ． （fill fraction）
（2）Cube edges and vertices add up to a total of how many？ $\qquad$
（3）870－650－430－220＝0，the excess number on the above equation is $\qquad$

Fill in + or - or $x$
（4） 42 $\qquad$ $18=6$ $\qquad$ 4
（5） 8 $\qquad$ 8 $\qquad$ $8=72$

Part 3．Calculations（Each question 10 marks．Total 50 marks）
（1） $\qquad$ $\times 6=30$
（2） $7 \times$ $\qquad$ $=49$

（4）


Part 4．Applied Questions（Each question 10 marks．Total 50 marks）
）（1）A bread is 22 dollars，pay a 100 元，how many breads can you buy？
）（2） $\mathbf{A}$ has 54 marbles， $\mathbf{B}$ is $\frac{1}{2}$ of $\boldsymbol{A}$ ， $\boldsymbol{C}$ is $\frac{1}{3}$ of $\boldsymbol{A}$ ，How many marbles are there for three peoples？
）（3）Planting trees on one side of the road，Each tree is 5 meters apart，How many meters are there from the first tree to the 10th tree？
）（4 There is a hexagonal flower garden，planting 7 trees on each side，how many trees are there in this garden？ （the vertices do not Planting）
）5 There is a 3 －digit number that greater than 700，and it＇s tens place number twice is equal to hundreds place number，what is maximum of this 3－digits number？

Part 1．Multiple Choice（Each question 10 marks．Total 100 marks）
（元：dollars）
（ ）1）${ }^{A}$
（ ）2 1 kg is how many grams？（1） 1 g （2） 10 g （3） 100 g （4） 1000 g ．
（ ）On the clock face，the second hand from 1 to 5 ，is passed（1） 15 （2） 20 （3） 5 （4） 45 seconds．
（ ）4 Summand＋Addend＝Sum，If Summand increased，Addend unchanged，the Sum will （1）increased（2）decreased（3）unchanged．
（ ） 5 Which one on the right is not a fraction？
（1）$\frac{1}{4}$
（2）$\frac{2}{3}$
（3） 3
（4）$\frac{4}{5}$
（ ）In the decimal followed by any 0 ，the value of this decimal will be
（1）increased
（2）unchanged
（3）decreased
（4）not necessarily．
（ ） $70 \times 40$ the answer will be followed by a few 0？
（1） 1 （2） 2
（3） 3
（4） 4.
（ ）${ }^{(3)}$ Which division equation without a remainder？（1） $75 \div 7=$（2） $64 \div 9=$（3） $80 \div 3=$（4） $55 \div 5=$ ．

（ ）（1）With the same size of the cubes to stacked building blocks，if the volume is bigger， The cube will use（1）the more（2）the less（3）not necessarily（4）can not count．

## Part 2．Fill in the blanks（Each question 10 marks．Total 100 marks）

（1） 0.2 meter and 3 mm is $\qquad$ cm．
（2）$\frac{49}{50} \rightarrow \frac{44}{50} \rightarrow \ldots \quad \rightarrow \frac{34}{50} \Rightarrow \frac{29}{50}$
Fill in the blank（using 24－hour clock）
（3）It＇s ten thithy－nine in the afternoon．
（4）17：45 $\Rightarrow$
$\square$
$\qquad$ ： $\qquad$
$\qquad$ ．m．

Fill in the blank（use $>o r<o r=, ~ \square$ is any number）
（5）398＋3 $\square 3$ $\qquad$ $79 \square+102$
© 5 kg $\qquad$ 59
（7） 0.6 l $\qquad$ $1.2 \ell$
（3） 0.9 m $\qquad$ 90 cm

Find the perimeter of each figure（Unit：cm）
$\theta$

perimeter $\qquad$
$\qquad$ cm ：perimeter cm

Part 3．Calculations（Each question 10 marks．Total 100 marks）
is $\qquad$ $-9$


The empty box is not covered． 1 is cubic centimeter．How many 7 is made fill up the empty box？（Units：cm）


## Part 4．Applied questions（Each question 10 marks．Total 100 marks）

（
）（1）Find the perimeter of the following figure（Unit： cm ）
 ）（2）$\frac{13}{16}$ must add a minimum of what fraction to become an integer？
）（3）Dad Today 8：30 am on a business trip，the trip is a total of 32 hours，When will he go home？

）（4 A box of cookies total weight of 400 grams，box weight 64 grams， which installed 12 packets，how much weight grams per packet？
）5 The following area of the square are the same．After playing some holes above each（each hole is the same size），which one the remaining area is the least？


）（ How many routes are there from Pig＇s home to School？

）（7）A has 265 dollars．$A$ has 135 dollars less than B．B has how many dollars？

A has 265 dollars
A has 135dollars less than B
$B$ has how many dollars？
）${ }^{3}$
One Taxi can carry 4 passengers， how many Taxi can be carried 27 passengers？

）$\Theta$ A milk bottle is 1 liter and 500 m ． If can fill five cups．How much can each cup hold？

）（1）is 8 cubic cm ．A big cube can be stacked with 18 $\qquad$ Another big cuboid can be stacked with 15 $\square$ What is the total volume of the two？

## Part 1．Multiple Choice（Each question 10 marks．Total 50 marks）

（ ）（1）$A \times B=247, B$ is $13, A-B=$（1） 13 （2） 7 （3） 5 （4） 6 ．
（ ）2 In the fraction with denominator is 8 ，how many proper fractions are there that denominator bigger then 0 and smaller than 8 ？（1） 8 （2） 7 （3） 5 （4） 6.
（ ） 3 If cylinder and cone have same bottom area and height，which one has larger volume？ （1）cylinder（2）cone（3）not necessarily．
（ ）4 Division．The dividend $(\neq 0)$ remains unchanged．Divisor becomes smaller．The answer will（1）unchanged（2）decrease（3）increase（4）not necessarily．
（ ） 5 There are two identical triangles，because of different ways to be arrangement，arranged out of the area will be different，it is right？（1）yes（2）no（3）not necessarily（4）can not compared．

Part 2．Fill in the blanks（Each question 10 marks．Total 50 marks）

（1）The largest students number is the grade，there are $\qquad$ people．
（2）The smallest students number is the $\qquad$ grade，there are $\qquad$ people．
（3）The students number in fourth grade and fifth grade difference of $\qquad$ people
（4）All grade a total of $\qquad$ people．
5 In accordance with long straight bar trend can be seen in FIG，with the smaller grades， the students number will be $\qquad$ ＿．
（Fill increase，decrease or unchanged）
Part 3．Calculations（Each question 10 marks．Total 50 marks）


## Part 4．Applied Questions（Each question 10 marks．Total 50 marks） <br> ）（1）Equation $35 \square \div 4$ just can be divisible，What numbers can be filled in $\square$ ？

）（2）There are three numbers $A, B$ and $C$ ．$A$ is half of $B, C$ is 50 times of $B, C$ is how many times of $A$ ？
）（3）There is a barrel of 3 liters of salad oil，Mom used 0.2 liters today，yesterday more than today use $\frac{1}{10}$ liters，how many liters of salad oil is left？

Four square are arranged as shown， with overlapping．Each square has the side length of 12 cm ．Find the entire area of figure．


## ） 9

Mary dancing the PPAP dance， starting from 9：58，ended to 10：02，in the middle because of careless fall，she missing 1 minute 2 seconds，how many seconds did she dancing？

Part 1．Multiple Choice（Each question 10 marks．Total 100 marks）
（ ）A triangle with an obtuse angle is called an
（1）obtuse triangle
（2）acute triangle
（3）right triangle
（4）not necessarily．
（ ）2 The smaller the area occupied by the circular chart，the number of representatives is
（1）more
（2）less
（3）fixed
（4）not necessarily．
（ ）（3）Last night at 12 o＇clock，is what time in this morning？（1） 6 （2） 2 （3） 12 （4） 0 o＇clock．
（ ）4 The estimate takes into ten－thousands digit，Should be judged by the which one？
（1）tens
（2）hundreds
（3）thousands
（4）ten thousands．
（ ） 5 Multiplicand by 1000 times，is the multiplicand followed by a few 0？（1） 1 （2） 2 （3） 3 （4not necessarily
（ ） $72 \div a=9$ ，then $a=$（1） 6
（2） 8
（3） 63
（4） 9.
（ ） 9 A number $(\neq 0)$ divided by 1000 ，the quotient will be this number of
（1） 100 times
（2） 1000 times
（3）$\frac{1}{100}$
（4）$\frac{1}{1000}$ ．
（ ）What is the smallest number on the right？
（1） $9 \frac{9}{100}$
（2） $9 \frac{9}{10}$
（3） 9.90
（4） 9.19 ．
（ ）$\Theta$ There are three straight lines $A, B$ ，and $C$（not collinear），$A$ and $B$ are parallel，$B$ and $C$ are vertical， Then $A$ and $C$ each other will be（1）parallel（2）vertical（3）not intersect（4）not necessarily．
（ ）（1）There are two different fractions，but their values are equal，It can be called
（1）unit fractions（2）irreducible fraction
（3）equality fractions
（4）unlimited fraction．

## Part 2．Fill in the blanks（Each question 10 marks．Total 100 marks）

（1）$\frac{6}{11+(\quad)}=\frac{3}{11}$
（2）Kite shaped along two diagonal to cut， It＇s become $\qquad$ right angles triangles．
（3）$\frac{1}{A}>\frac{1}{B}>\frac{1}{C}, A, B, C$ three numbers，the smallest is $\qquad$ ．
（4）Time to say a word about two
（fill in the time unit）
（5）A divided by $B$ ，quotient is 30 ，if $A$ and $B$ at the same time increases 5 times，quotient would become $\qquad$ ．
©＂Six hundred and seventy thousand one thousand two hundred thirty－four＂ the Arabic numerals writing $\qquad$ ．
（7）A common year and a leap year for a total of
$\qquad$ days．


## Part 3．Calculations（Each question 10 marks．Total 100 marks）

（1） 2 trillion 700 billion +1 trillion 500 billion
$=$ $\qquad$ trillion $\qquad$ billion
（2） 4 hours 59 minutes＋ 6 hours 2 minutes $=$ $\qquad$ hours $\qquad$ minutes
（3） $2 \frac{8}{13}-\frac{21}{26}=$ $\qquad$
（4） $3456 \times 789-3456 \times 89=$ $\qquad$
（5） $5976 \div 72=$ $\qquad$
（3） $3.88 \times 25=$ $\qquad$
（7） $170 \div a=11 \ldots 5, a=$ $\qquad$
© $(365-b) \div 7-9=42, b=$ $\qquad$
Find the perimeter of each figure（Unit：cm）


Part 4．Applied questions（Each question 10 marks．Total 100 marks）
（
）（1）Find the perimeter of the parallelogram？（Unit：cm）


There are 2 liters of water， younger brother want to average were loaded into the 25 water polo， how much milliliter of water can be loaded into each water polo？
（3）The freeway distance mark is installed every 100 meters，What is the distance from the first to the 100th distance mark？

）4 John savings 1320 dollars per month，Mary three years total savings 36，000 dollars，how much difference does two people average savings of a year？
） 9
Department store last month＇s revenue is 1267594 dollars，This month＇s revenue is 981165 dollars，how much the revenue difference of two months？（estimates to ten thousand and recalculated）
）${ }^{(3)}$ Find area of the figure（Unit：m）

）（7）Older sisters from 7：52 pm to start washing dishes，Finished in 19 minutes，What time is it done？
）- The following figure is a bar chart，showing the fourth grade 5 classes students number，which 2 classes has same students number？


A pack of chewing gum has 20 pieces，David ate $2 \frac{1}{2}$ packs， Martin ate $1 \frac{3}{5}$ packs，how many pieces of chewing gum that two people ate？

）（1）A car is travel 36.8 kilometers per hour，B car is travel 42.5 kilometers per hour，both at the same time，the same location and the same direction to leave， 3 hours later，how many kilometers away from the two cars？


## Primary 4 Expert Level Gifted Math Challenging Questions

## Part 1．Multiple Choice（Each question 10 marks．Total 50 marks）

（ ）$A \times 3=1, B \times 4=1$ ，then $A+B=$ ？
（1）$\frac{1}{2}$（2）$\frac{7}{12}$
（3）$\frac{2}{3}$
（4）$\frac{3}{4}$ ．
（ ）2 minuend $\div$（subtrahend＋diffrence）$=(1) 1$
（2）minuend
（3）subtrahend
（4）can＇t divided．
（ ）If want to estimates number from the high－place to take two－place，it should be rounded from the high－place since the what－place？（1） 1 （2） 2 （3） 3 （4） 4 place．
（ $\quad 4$ $9981 \div 99$ ，quotient is 100 ，then remainder is（1） 81
（2） 82
（3） 91
（4） 99.
（ ） 5 Winter the length of day－time is 11 hours 36 minutes，then the length of night－time is
（1） 11 hours 36 minutes
（2） 11 hours 24 minutes
（3） 13 hours 24 minutes
（4） 12 hours 24 minutes．

Part 2．Fill in the blanks（Each question 10 marks．Total 50 marks）
in the right what is the value of＂7＂represents


Part 3．Calculations（Each question 10 marks．Total 50 marks）
（1）Second hand and then turn 11 laps is $\qquad$ ： $\qquad$ ．
（2） $5 \frac{7}{8}-$ $\qquad$ $+1 \frac{1}{2}=4 \frac{3}{5}$
（3） $0.14 \times 0.98+0.14 \times 0.02=$ $\qquad$


Find gray areas of the following figures（Unit：cm）
©


Part 4．Applied Questions（Each question 10 marks．Total 50 marks）
）1 Sunny made a mistake that divisor 8 was seen as 5 ，get the quotient is 48 ，what is the correct quotient？
）（2）Earth runs 1,800 kilometers per minute around Sun，how many kilometers Earth can run for half an hour？
）（5）There is a fractions，the denominator is larger than the numerator 7 ， 7 times the numerator is 77 ， what is this fractions？
）（4 There is a 33 cm long， 21 cm wide rectangular card，want to cut out each side of the length of 3 cm small square，how many sheets can you cut？
） 5 Freight company shipping 1000 cups，each shipping 5 dollars，but if broken，not only did no freight，and a cup also compensation 50 dollars， finally get freight 4835 dollars， how many cups are broken？
（ ）Which one is the fan on the right？

（ ）（2）The international symbol of the hectare is（1） $\boldsymbol{m}^{2}$（2） $\mathbf{k m}^{2}$（3）a（4）ha．
（ ）${ }^{3}$＂$A$＂in the right is called（1）bottom face（2）side face（3）vertex（4）edge

（ ）4 The result of the fractional calculation is the improper fraction，should become
（1）mixed fraction（2）proper fraction
（3）not necessarily（4）
unable to calculate
（ ） 66 days is the number of times 6 hours？
（1） 12 times
（2） 24 times
（3）$\frac{1}{12}$
（4）$\frac{1}{24}$ ．
（ ） $3 \frac{54}{100}$ as a percentage is（1） $0.54 \%$
（2） $5.4 \%$
（3） $54 \%$
（4） $540 \%$ ．
（ ）（7） $360 \div a<20,240 \div b<16$ ，the maximum value of $a, b$ should be
（1）$a>b$
（2） $\boldsymbol{a}<\boldsymbol{b}$
（3）$a=b$
（4）not necessarily．
（ ）Billy subjects of final exam results，suitable to drawing what kind the chart？
（1）Line chart
（2）Bar chart
（3）Both can be．
（ $) \Theta$ The symbol＂$\sim$＂in the chart（diagram）that means
（1）vertical axis
（2）horizontal axis
（3）beautiful
（4）omitted．
（ ）（D）There two triangles $A$ and $B$ ，both the base are 10 cm ，$A$ height is 10 cm ，$B$ height is 20 cm ，area $A$ is how many times of area $B$ ？
（1）as same
（2） 2 times
（3）$\frac{1}{2}$
（4） 4 times．

Part 2．Fill in the blanks（Each question 10 marks．Total 100 marks）
Find the maximum or minimum integer for the unknowns
（1）$a-45>123$ ，$a$ minimum should be $\qquad$ ．
（2） $6 \times b>789, b$ minimum should be $\qquad$ ．
（3）$c \div 4<17$ ，c maximum should be $\qquad$ ． Fill in the blank（use $>$ or $<$ or $=$ ）
（4） 9.68 Square kilometers $\qquad$ 9680 hectare
（5） 0.12 $\qquad$ 1．2\％

Find the central angle $A$ of each fiqure

## ©



Angle $A=$ $\qquad$ degree
1


Match the correct polyhedron with their descriptions


## Part 3．Calculations（Each question 10 marks．Total 100 marks）

（1） $8 \frac{1}{12}$ minutes -6.05 minutes $=$ $\qquad$ seconds
（2） 3 hours 28 minutes $\times 4=$ $\qquad$ minutes
（3） $7 \times 64 \div 5=$ $\qquad$ （fill in with fraction）
（4） $62.894 \div 41=$ $\qquad$
（5） $87.647 \div \frac{1}{7}=$ $\qquad$
（5）A perigon divide to eight equal portions， each central angle is $\qquad$ degrees．

## Find the area of each figure（Unit：cm）



## Part 4．Applied questions（Each question 10 marks．Total 100 marks）

（
）（ Find gray areas of the following figures．（Unit：cm）


Side length of the cube is 23.456 cm ，What is the sum of its side length？

）（4 Mom made a sweater need 4 hours 25 minutes，make some sweater for Dad，older brother and me each，how much total time does she required？
） 5 Dad Today 3：30 pm on a business trip，he is expected to come back tomorrow 10：40 am，how long did he take？
）（5）if $\frac{A}{7} \times \frac{B}{7}=1$ ，then $A \times B=$ ？
）（7）Seawater per kilogram of salt 35 grams，what is the percentage of salt in seawater？
）－Older brother online that one week a total of 8 hours 38 minutes，how much time does he online every day average？

） 9 A truck can load 1.5 tonnes， cabbage sell 12 dollars per 0.8 kg ， how many dollars can sell a cabbage filled with a truck？

（1）Strips of wood are made into a regular pentagonal prism－shaped lanterns．How many centimeters of wood are used？


Part 1．Multiple Choice（Each question 10 marks．Total 50 marks）
（）$\frac{45-x}{3}=8, x=$（1） 21 （2） 22 （3） 13 （4） 40.
（ ）Base and lateral face of the pyramid will not be perpendicular to each other？
（1）Yes
（2）No
（3）Not necessarily
（4）Impossible to tell．
（ 3 Which the polyhedron that each plane surface is triangle？
（1）Hexagonal Pyramid
（2）Triangular Prism
（3）Triangular pyramid
（4）Pentahedron pyramid．
（ ）4 The proper fractions with the same denominators then divide each other，it is the dividend and the divisor numerator how about each other？（1）addition（2）subtraction（3）multiplication（4）division．
（ ） 5 The different shapes of the triangle such as same base and same height，the area will be the same，it is right？（1）Yes（2）No（3）Not necessarily（4）Do not compare．

Part 2．Fill in the blanks（Each question 10 marks．Total 50 marks，
（1）$\frac{1}{2}+\frac{1}{4}+\frac{1}{8}+\frac{1}{16}+\ldots+\frac{1}{2048}=$ $\qquad$
（2） $0.987 \div \frac{B}{A}=C$ ，as known $C<0.987$ ， then $A$ and $B$ who is larger？

## Racing results table

| Name | Micky | John | Mary途 | Jane （ |
| :---: | :---: | :---: | :---: | :---: |
| Distance <br> （m） | 138 | 150 | 140 | 144 |
| Running time（ s ） | 25 | 24 | 25 | 24 |

（3）Mary and Jane who ran faster？ $\qquad$
（4）Who ran the fastest？ $\qquad$
（5）Running the same distance，short running time is faster？or long running time is faster？ $\qquad$
Part 3．Calculations（Each question 10 marks．Total 50 marks）
（1） $5 \frac{13}{14} \times\left(\frac{1}{2}-\frac{1}{3}+\frac{1}{6}\right)=$ $\qquad$
（2） $9 \times(4 a \div 3)=180, a=$ $\qquad$
（3） 11 hours 15 minutes $\div(2$ hours 30 minutes $\div 6)$ $=$ $\qquad$
Find gray areas of the following figures（Unit：cm）


5


```
Part 4. Applied Questions (Each question 10 marks. Total }50\mathrm{ marks)
    )(1) }\times\frac{1}{2}\times\frac{1}{3}\times\frac{1}{6}=\frac{1}{2}+\frac{1}{3}+\frac{1}{6,}\square=\mathrm{ ?
```

）（2）There are two positive integers $A$ and $B . A=B+10$ ，and $A \times B=96$ ， then $A+B=$ ？
） 3 There are two squares below， find area of triangle $A B C$ ． （Unit：cm）

（4）Sunrise starts at 6：15 am and sunset at $5: 55 \mathrm{pm}$ ，what is the difference between day and nighttime？
）5 The pool is filled with two sizes of water pipes，small water pipe 20 liters per minute，large water pipe 60 liters per minute，after 1.5 hours can be filled，the pool capacity is how many kiloliters？

## Primary 6

Set 1
Time Allowed :15 minutes

Part 1. Multiple Choice (Each question 10 marks. Total 100 marks) $\quad(\pi=3.14)$ (元: dollars)
( ) (1) As shown, the inverse proportion relationship is (1) A (2) B (3) C (4) D.
( )2 The sum of two consecutive odd numbers is 40 , the larger number is
(1) 18
(2) 21
(3) 19
(4) 20.

)(5) The probability will be between which two numbers? (1) 0~1
(2) $0 \sim 10$
(3) $0 \sim 100$
(4) $1 \sim 2$.
( )4 Which coordinate in right above $(6,0)$ ?
(1) $(1,6)$
(2) $(0,6)$
(3) $(6,1)$
(4) $(3,3)$.
( )5 Which one can find the Velocity? (1)Distance+Time (2)Distance-Time (3)Distance $\times$ Time (4)Distance $\div$ Time.
( ) ${ }^{-1}$ The volume formula of the cube is the (1) Length $\times$ Width $\times$ Height
(2) Side length $\times$ Side length $\times$ Side length
(3) Side length $\times 3$
(4) Base area $\times$ Side length.
( ) $\quad \mathbf{a}-10=5$, if want to find $a$, at the same time both sides of the equation must be
(1) plus 10
(2) minus 10
(3) multiplied by 10
(4) divided by 10.
( ) 13 consecutiveoddnumbers, theiraverageis just equal to the (1) 5th (2) 6th (3) 13rd (4) 7th number
( ) $\Theta$ In the equation of continuous addition or continuous multiplication, the operation sequence is exchanged, the results will not change, it can be called
(1) operational law
(2) distributive law
(3) commutative law
(4) associative law.
( )(1) A cup of 250 grams of salt water contains 30 grams of salt, if the ratio is unchanged, 800 grams of water, should contain how many grams of salt? (1) 88 (2) 96 (3) 106 (4) 98 grams.

Part 2. Fill in the blanks (Each question 10 marks. Total 100 marks)

- 916233037 ...,

According to the rule, the 30th number is $\qquad$
(2) The 100th squares are $\qquad$ (fill white or gray)

## Statistics of donations for the sixth grade

| amount of <br> donations | 100 | 150 | 200 | 250 | 300 | 350 | 400 |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| number of <br> people | 1 | 3 | 10 | 7 | 5 | 4 | 2 |

(3) The Median amount of donations is $\$$
(4) The Mode amount of donations is \$

5 The average amount of donations per person is $\$$ $\qquad$ .

Map of Mary's home
(Uniticm)

©Mary's home position in coordinates ( _-
$(7)$ The school location is $\qquad$ kilometers north of Mary's home.
(3) The coordinates of 7-11 are ( $\qquad$ , _
© From the Mary's home to the north 0.5 km , and then 1.5 km east will reach the
(1) Railway station is in the $\qquad$ of the Mary's home. (Fill southeast, northwest, northeast or southwest)

## Part 3. Calculations (Each question 10 marks. Total 100 marks)

(1) if $2.3 \ell$ as 1 , the ratio of $6.44 \ell$ is $\qquad$
if 7.5 km as 1 , equivalent to $30 \%$ is $\qquad$ m.
(3) $145 \%$ of 80 grams is $\qquad$ grams.
(4) $x$ 's $1 \frac{2}{3}$ times is $9 \frac{3}{4}, x$ is $\qquad$ .
(5) $10.4 \times\left(\frac{5}{8}-\frac{1}{4}\right)=$ $\qquad$
(e) $6 \frac{5}{12} \div \frac{5}{14}+\frac{14}{15} \times \frac{3}{21}=$ $\qquad$
(7) $a+\frac{2}{9}-3 \frac{1}{4}=8 \frac{7}{9}, a=$ $\qquad$
(3) $(b-4.5) \times 2 \frac{1}{3}=7, b=$ $\qquad$
Find the volume of each figure (Unit:cm)


## Part 4．Applied questions（Each question 10 marks．Total 100 marks）

）（1）As shown，older brother bought a sandwich for breakfast，what is the volume of this sandwich？


There are three numbers $A, B$ and $C$ ，the average of the three numbers is $x$ ，then $A$ plus $21, B$ plus 14 and $C$ plus 7 to take a new average，how much is this new average more than the original average？
）（3）John＇s first to fourth math test were 91，89，94，96 points，how many points will the fifth test， the average score will be 93 points？
）（4）There are eight kinds of pencil in the stationery shop，each $\$ 15$ ，if the purchase with a ballpoint pen can save $\$ 10$ ，with the purchase price of less than（or including） $\$ 50$ how many kinds of ways？

Price of the ballpoint pen and number of kinds

| Price <br> （dollars） | 35 | 40 | 45 | 50 |
| :---: | :---: | :---: | :---: | :---: |
| Kinds | 4 | 2 | 5 | 8 |

A ship＇s hydrostatic speed is 35 kilometers per hour，it sails in a river flow speed of 5 kilometers per hour，if forward flow，from $A$ to $B$ driving a total of 2 hours， what is the distance between the two places？
）Coordinates（ 2,7 ），first move down 5，and then move to the right 5，what is the coordinates of the last position？
）（7）A project， 3 workers can be finished in one week，if you want to finish in 3 days，how many workers do you need？

## ）${ }^{(3)}$

An empty bottle can be loaded 0.75 kg of rice wine，a dozen rice wine a total of 12.6 kg ，an empty bottle weigh？
）9 A box of 200 eggs，the probability of damaged on the way to the carriage is about $\frac{3}{1000}$ ， if the carriage of 210 boxes of eggs，how many eggs may be damaged？
）（1）There are two containers $A$ and $B$ ，each capacity is 1 liter， container A filled with water half full，container $B$ filled with water nine full，container $B$ to pour down how much water to the container $A$ ，that the water of the two containers will be the same？

## Part 1．Multiple Choice（Each question 10 marks．Total 50 marks）

（
） 1 If $\bigcirc=\triangle+\triangle+\triangle$ ，then $(\bigcirc-\triangle):(\bigcirc+\triangle)=$
（1） 1
（2）$\frac{1}{2}$
（3）$\frac{1}{3}$
（4）$\frac{1}{4}$ ．
（ ）The coordinates $(1,2)$ are in the $(3,4)$（1）southeast（2）northwest（3）northeast（4）southwest．
（ ）The large number is three times the small number，if the small number is 4 ，the large number is（1） 16 （2） 12 （3） 15 （4） 14.
（ ）4 if right cylinder and right prism with same bottom area and same height，which one is larger？
（1）right cylinder
（2）right prism
（3）can not compare
（4）both same．
（ ） 5 Which one is inversely proportional？（1）Speed fixed，distance and time relationship （2）Time fixed，speed and distance relationship（3）Distance fixed，speed and time relationship（4）All of the above．

Part 2．Fill in the blanks（Each question 10 marks．Total 50 marks）
Match the correct with same $x$（Find $x$ ）
（1）
（2）
（3）


Part 3．Calculations（Each question 10 marks．Total 50 marks）
Diamond long axis＋short axis $=20 \mathrm{~cm}$
（1）Please complete the table form below．

| long axis（m） | 19 | 18 | 17 | 16 | 15 | 14 | 13 | $\ldots$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| short axis（m） | 1 | 2 | 3 | 4 | 5 | 6 | 7 | $\ldots$ |
| Area（ $\left(\mathrm{cm}^{2}\right)$ | 9.5 | 18 |  | 32 | 39.5 | 42 | 45.5 | $\ldots$ |

（2）When the long axis is equal to the short axis ，the area is $\qquad$ $\mathrm{cm}^{2}$ ．
（3）When the long axis is 4 times the short axis ，the area is $\qquad$ $\mathrm{cm}^{2}$ ．

Find the volume of each figure（Unit：m）

Part 4．Applied Questions（Each question 10 marks．Total 50 marks）
）（1）A＇s $\frac{3}{4}$ is $B^{\prime} s \frac{3}{8}, B^{\prime} s \frac{1}{3}$ is $C^{\prime} s \frac{2}{9}$ ， if $C$ is 5.4 ，then $a+b+c$ ？
）2 There are a total of 20 cars and tricycles，a total of 75 wheels， how many cars are there？
）（3）There are four two－digits number are $83,77, \square 5,8 \square$ ．Thier average is $86, \square$ are the same number，how much is $\square$ ？
）4 David to do four questions four choose one of the multiple choice questions，found that all will not do，all guess right the probability of how much？

## ） 12344 are digit cards． How many types of combinations into four－digits？



Part 1．Multiple Choice（Each question 10 marks．Total 50 marks）

| ${ }_{11} \dot{\nabla}=(1) \dot{\nabla} \text { (2) } D \text { (3) } \triangle$ |
| :---: |


（ （ $)^{4} 0, \eta+\square+0, \square=(1) 7$（2） 5 （3） 3 （ ） 5 are there，come in，and runs away，how many are left？（1） 1 （2）2（3）3 crabs．
Part 2．Fill in the blanks（Each question 10 marks．Total 50 marks）How many building blocks are there？


Part 3．Calculations（Each question 10 marks．Total 50 marks）


Part 4．Applied Questions（Each question 10 marks．Total 50 marks）
（1）There are 2 ，how many beetles are there in all？ $\qquad$ beetles （2）There are 6 and 6 cicadas
 $?$ $\qquad$ shells

 $\qquad$ feets
$\qquad$ feets


Part 1．Multiple Choice（Each question 10 marks．Total 50 marks）
（元：dollars）
（ ） 0 $\eta+(\quad)=\square,(\quad)=(1) \square$ （2） 4
（3） 7
（4）$\theta$

（2） 43
（3） 53
（4） 58 dollars．
（ ）${ }^{3}$
$48 \rightarrow 45 \rightarrow \square \rightarrow 39, \square=$
（1） 41
（2） 42
（3） 30
（4） 38
（ ）4
$43-21 \square 8=30$ ，$\square=(1)+$
（2）－
（3）$=$
（4）$\times$

（1） 16
（2） 8
（3） 12
（4） 4 feets．

Part 2．Fill in the blanks（Each question 10 marks．Total 50 marks）How many building blocks are there？


Part 3．Calculations（Each question 10 marks．Total 50 marks）


Part 4．Applied Questions（Each question 10 marks．Total 50 marks） Which one is
$\qquad$ were left，The original amount was

Part 1．Multiple Choice（Each question 10 marks．Total 50 marks）
（ ）Which one is most easily rolled？
（1）$\theta$
（2） $\square$
（3） $\square$
（4）

（ ）There are three sheets of paper stacked together，the smallest sheet is the triangle（1）triangle
（2）square
（3）circle
（4）the same．
$(\quad)$ Which is not a completed flat shape？

（2） $\qquad$
（3） II

（ ）4 There are 2 two－digits number，and compare their value，if one of the tens place is relatively small，ones place is larger，that its value is relatively（1）larger（2）smaller（3）same（4）cant compared
（ ） 5 Mom with 3 hours a day doing housework，five days used a few minutes？
（1） 1000 minutes
（2） 640 minutes
（3） 900 minutes
（4） 500 minutes．

Part 2．Fill in the blanks（Each question 10 marks．Total 50 marks）
（1）｜｜｜$\rightarrow$ $\qquad$ $\rightarrow 95 \rightarrow 87 \rightarrow$ $\qquad$
（2） 509 are digit cards．What is the difference between the bigger 2－digit and the smaller 2－digit number that you can arrange with the cards？ $\qquad$
（3）$\$ 86$ cheaper than $\$ 130$ how much dollars？ $\qquad$ dollars
（4）There are 56 in the air，first broken 18 ，and then broke the 23 ，how many left？ $\qquad$ ©
（5）4 4 difference how many feet？ $\qquad$ feet

Part 3．Calculations（Each question 10 marks．Total 50 marks）
Please connect the dots to form groups of $\$ 100$ ．


Part 4．Applied Questions（Each question 10 marks．Total 50 marks）
）（ How many matchsticks are there？

）（2）A bouquet of flowers is 12 flowers， 2 bouquets and 5 flowers is a total how many flowers？
）（3）Dan has 8 （10，He buys a hamburger for 39 dollars and a coke for 21 dollars．How many （10） does Dan have left？
）4 Dad is 170 cm tall，older brother is 66 cm shorter than Dad，how many centimeters are the height of the two？
） 5 To buy movie tickets，there are 52 people in front of David， Mary are 21 people in front of him，what number is Mary？ 1st

52 people

（ ）1 There are 46 （10）and 8 （5）you can change a few 100 元？（1） 5 （2） 6 （3） 3 （4） 4 100 元．
）（2）$A \times \square-C=D, \square=(1)(D-C) \div A$
（2）$(D+C) \div A$
（3）$(D+C) \times A$
（4）$(D-C) \times A$ ．
layers．
（ ）${ }^{3}$ With 729 small cubes stacked into a large cube，it＇s can be stacked into（1） 9 （2） 2 （3） 3 （4） 27
（ ）4 There is a 3－digit number，larger than 615 ，but less than 888 ，it is possible which number of the following？（1） 516 （2） 598 （3） 651 （4） 898.
（ ） 58 apples can be packed into a box，how many apples are there in 7 empty boxes？
（1） 56 apples
（2） 42 apples
（3） 35 apples
（4） 0 apples．

## Part 2．Fill in the blanks（Each question 10 marks．Total 50 marks）

（1） $\qquad$ $\rightarrow 150 \rightarrow 175 \rightarrow$ $\rightarrow 225$
（2）There is a 3－digit number，ones－place digit plus hundards－place digit is equal to tens－place digit，and the number greater than 400 is $\qquad$ ．
（3） 4 bottles of soda is a dozen of soda $\qquad$ （fill with fraction）
（4） $468+20+32+100=600$ ，the excess number on the above equation is $\qquad$ ．
（5）880－330－200－450＝100，the excess number on the above equation is $\qquad$ ．

Part 3．Calculations（Each question 10 marks．Total 50 marks）

（1）Bought $3 A$ and $1 B$ ，you should to pay
$\qquad$ dollars．
（2） B is $\qquad$ dollars more expensive than $A$ ．
（3）With（50）（10）to bought $2 A$ and $2 B$ ， that＇s enough to pay？ $\qquad$
（4）With 1000 元 to bought 3A and 1D， that＇s enough to pay？ $\qquad$
5 Buy 33A and buy 1D difference between how much dollars？ $\qquad$ dollars

Part 4．Applied Questions（Each question 10 marks．Total 50 marks）
）（1）Older brother to deposit 600 dollars per month，six months later，how many dollars does he deposited？
）（2）A jar of 69 candies，older brothers，younger brother， older sisters and younger sisters each eat 9 candies，how many candies lefts in the jar？
）B Blocks are arranged in following sequence，how many $\square$ are in item 9？

）（4 Mom bought three cakes，who eaten the most？

）5 50 whata fraction of 1000 元？
（Refers to denomination）

Set 2
Time Allowed ： 3 minutes

Part 1．Multiple Choice（Each question 10 marks．Total 50 marks）
（ ）1 Different pure decimal addition，the sum will be an
（1）integer
（2）pure decimal
（3）mixed decimal
（4）not necessarily．
（ ） 21 kg of stone and 1 kg of cotton，which one is heaviest？
（1）stone
（2）cotton
（3）the same weight
（4）can not compared．
（ ）Division．The dividend $(\neq 0)$ remains unchanged，divisor becomes larger，the quotient will
（1）decrease
（2）increase
（3）unchanged
（4）not necessarily．
（ ）4 Triangle needs a few straight lines to be surrounded？
（1） 1 straight line
（2） 2 straight lines
（3） 3 straight lines
（4）Above can be．
（ ） 5 If cylinder and cone have same bottom area and height，which one has larger volume？
（1）cylinder
（2）cone
（3）not necessarily．

Part 2．Fill in the blanks（Each question 10 marks．Total 50 marks）
（1） 5 meters is the how many times of 0.01 meters？ $\qquad$ times
（2） $29 \ell 4 \mathrm{~d} \ell=$ $\qquad$ $\ell$
（3）A flag has 3 colors，how many colors does the 8 same flags？ $\qquad$ colors

How many total time passed？
（4） $11: 16 \Rightarrow 12: 11$ ，＿＿hours＿＿＿minutes
（5）05：55 $\Rightarrow 21: 47$ ，＿＿＿hours＿＿＿minutes
Part 3．Calculations（Each question 10 marks．Total 50 marks）
Class A，B，C male and female students number bar chart

（1）The largest students number is class
$\qquad$ there are $\qquad$ people．
（2）The least students number is class
$\qquad$ there are $\qquad$ people．
（3）The largest difference between male and female students number is the class $\qquad$ ， a difference of $\qquad$ people．
（4）All three classes of a total number of girls is $\qquad$ people．
5 All three classes of a total students number is $\qquad$ people．

Part 4．Applied Questions（Each question 10 marks．Total 50 marks）
）（1）As known $A, B, C$ weight may be 200 grams， 500 grams and 350 grams，C＇s weight should is a few grams？

）（2）Measuring a triangular plate， that an angle is 30 degrees， another angle is 90 degrees，is the third angle a few degrees？
）（3）The 418 dollars give to $A$ and $B$ ， A get 40 dollars more than $B$ ， how many dollars get each of $A$ and $B$ ？
）（4 Each square lattice side length is 1 cm ，find area of gray？

） 5 Mom bought oranges 38.3 dollars， pineapple 42.2 dollars， carambola 28.5 dollars， how many dollars did she pay？
（ ）1 If perimeter of the graphics is equal，which kind graphics area is largest？
（1）Square
（2）Circle
（3）Any quadrilateral
（4）All the same．
（ ）Summand $\div$（Sum－Addend）$=$（1） 1
（2）Summand
（3）Addend
（4）Can not be divided．
（ ） $60+100 \div A \times 2=100$ ，then $A=$（1） 15
（2） 10
（3） 20
（4） 5.
（ ） 4 （ $B \times B-B \div B=0(B \neq 0)$ ，then $B=(1) 1$
（2） 2
（3） 3
（4） 9.
（ ） 5 The equation 『 $12 \times 34+5 \div 6+7=85 』$ ，when the equation holds，where to add parentheses？
（1）$(6+7)$
（2）$(5 \div 6)$
（3）$(34+5)$
（4）do not add．

## Part 2．Fill in the blanks（Each question 10 marks．Total 50 marks）

A distance map of facilities near John＇s home

（1）John＇s home goes through the park，then reaches the school is $\qquad$ km．
（2）John＇s home goes through 7－11，then reaches the school is $\qquad$ km．
（3）The above two routes a difference of
$\qquad$ km．
（4）In the above two routes，the longest route is $\qquad$ km more than direct go to the school．
5 John went to school always choose the fastest route，back and forth a total of
$\qquad$ km．

Part 3．Calculations（Each question 10 marks．Total 50 marks）
（1） $123+456+789+132=$
（2） $1-\frac{8}{17}-\frac{9}{17}=$ $\qquad$
（3） $6 \frac{8}{9}+7 \frac{1}{9}-11-2 \frac{1}{9}=$
（4） $2.45 \times 0.8=$ $\qquad$
5 $\qquad$ $\div 8=73 \cdots 4$

Part 4．Applied Questions（Each question 10 marks．Total 50 marks）
）（1）The poster＇s length is 2.4 m ， width is 60 cm ，how many square meters of the area？how many meters of the perimeter？
）2 There are large and small two cubes，the small cube volume is $27 \mathrm{~cm}^{3}$ ，the large cube side length is 3 times small cube， what is size of the large cube？

TV factory January to June sales bar chart

）3 What is the difference between the largest and the lowest monthly Shipping Quantity？
）（4 What is the difference between the first quarter and the second quarter Shipping Quantity？
）S What is the total Shipping Quantity for this half year？

Primary 5

Set 2

Part 1．Multiple Choice（Each question 10 marks．Total 50 marks）
（ ）1．How many irreducible fractions are there between $\frac{3}{10}$ and $\frac{9}{10}$ ？（including $\frac{3}{10}$ and $\frac{9}{10}$ ）
（1） 0
（2） 2
（3） 3
（4）infinity．
（ ）2．How many decimals are there between 0.1 and 0.9 ？（including 0.1 and 0.9 ）
（1） 0
（2） 9
（3） 10
（4）infinity．
（ ）3．Which one is the smallest？
（1） $0.199 \ell$
（2） 201 ml
（3） $0.202 \ell$
（4） 210 ml
（ ）4．$A \div 2=B \times 2(A, B \neq 0)$ ，then
（1）$A>B$
（2）$A=B$
（3）$A<B$
（4）Above are all possible．
（ ）5．If the perimeter of the square and the circumference of the circle are equal， which one the area will be relatively large？（1）Square（2）Circle（3 ）The same （4）Not necessarily．

Part 2．Fill in the blanks（Each question 10 marks．Total 50 marks）
1．To make 85is a multiple of 9， $\square$ should fill $\qquad$ ．
2．$A \div 5=B$ ，therefore $A$ is $\qquad$ times the B．
3． $99 \mathrm{~m}^{3}=$ $\qquad$ kiloliters
4． 117 minures $=$ $\qquad$ hours $\qquad$ minuses
5．There is a cube，if the side length is increased by 5 times，the volume will be increased by $\qquad$ times．

## 三，計算題（每題 10 分， 5 題共 50 分）

1． $36.36 \div 72=$ $\qquad$
2．$\frac{3}{8} \times \frac{1}{2}+4 \times \frac{3}{8}=$ $\qquad$
3．$(18-12) \times 7-(7+$ $\qquad$ ）$=22$

4． $0.9 \times 3+0.9 \div 3=$ $\qquad$
5．Find perimeter of the oblique－line．$(\pi=3)$
（Unit：m） $\qquad$ m

> Part 4. Applied Questions (Each question 10 marks. Total 50 marks)
> ( )1. There is a square, side length is 20 cm , If want to draw a maximum circle in the square, what is circumference of the circle? $(\pi=3.14)$
）2．An apple is 0.6 kg ，a box loaded 25 apples，how many kilograms of apples in a box？
）3．With building blocks stacked into a 3 cm length， 4 cm width， 5 cm height cuboid．If change to stack into 5 cm length， 4 cm width cuboid．The height is how much centimeter？
（ ）4．The circumference of the isosceles triangle is 48 cm ，as known base－side is 12 cm ，please find the other two sides？
（ ）5．The school has boys 10 classes and girls 9 classes，boys class is 29 students per class，girls class is 27 students per class，how many students are there in the school？

Primary 6

Set 2
Time Allowed ： 3 minutes

Part 1．Multiple Choice（Each question 10 marks．Total 50 marks） （ ）1． 2.5 hours， $8.8 \mathrm{~kg}, 0.4 \mathrm{~m}^{2}$ ，Are all （1）single－unit number（2）compound number （3）none－unit number（4）All of the above （ ）2．Proper fraction multiplied by an integer（greater than 1），how will the product be the multiplicand？
（1）smaller
（2）larger
（3）equal
（4）above are possible．
（ ）3．Distance fixed，if the velocity becomes $\frac{1}{3}$ ，the time required becomes how many times the original？
（1）$\frac{1}{3}$
（2）$\frac{2}{3}$
（3）3times
（4）unchange．
（ ）4．Cost plus 20\％for list price，list price is 54 dollars，how much is the cost？
（1） 65
（2） 54
（3） 48
（4） 45 dollars．
（ ）5．Which of the following is closest to $9699 \mathrm{~m}^{2}$ ？
（1） 1 acre
（2） 1 hectare
（3） $1 \mathrm{~km}^{2}$
（4） $1 \mathrm{~m}^{2}$
Part 2．Fill in the blanks（Each question 10 marks．Total 50 marks）
1． $1 a=$ $\qquad$ square meters
（ $a$ is the international common area symbol）
2．The only even number in the prime number is $\qquad$ ．
3．If list price is $\mathbf{1 5 0}$ dollars．Selling price is 105 dollars．It＇s on sale for $\qquad$ \％off．
4．At the same time throwing the same two coins，the probability of a heads and a tails is $\qquad$ ．
5．The quadrangular pyramid have $\qquad$ faces．

Part 3．Calculations（Each question 10 marks．Total 50 marks）
1． $30 \frac{5}{6}+5 \times 7.5-18 \frac{1}{3}=$ $\qquad$
2． $10 \frac{1}{3}-0.9 \times \frac{5}{9} \div$ $\qquad$ $\times 6=4 \frac{1}{3}$
3．$\left(\frac{3}{5}+0.7\right) \times \frac{4}{13}=$ $\qquad$
4． $76.2 \div 3.1=$ $\qquad$ ．．．
（Find the quotient to integer，and find the remainder）
5．Find perimeter of the oblique－line．$(\pi=3)$
（Unit：cm） $\qquad$ cm

Part 4．Applied Questions（Each question 10 marks．Total 50 marks）
（ ）1．A bottle of shampoo selling price is 84 dollars，if earnings rate is 20\％sold a dozen and half，earned a total of how much money？
）2．The volume of the cylinder is 36,000 cubic centimeters，the height is 30 cm ，what is the surface area？$(\pi=3)$
）3．$A, B$ between the two places is 66.4 km，David walking 4 km per hour，every 1 hour walking for 10 minutes rest，how long does he take to finish the journey？
（ ）4．Find areas of the oblique－line． （ $\pi=3$ ）（Unit：cm）

）5．Find perimeter of the oblique－line．$(\pi=3)$（Unit：cm）


Taipei Mayor Cup International Mathematics And Mental Arithmetic Competition 2017 Kindergarten and primary school mathematics test paper answer (2017.8.12)

| Grade | Kindergarten (K2) |  |  |  |  | Kindergarten (K3) |  |  |  |  | Primary 1 |  |  |  |  | Primary 2 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| item | No | Choice | Fill blank | Calculations | Applied | No | Choice | Fill blank | Calculations | Applied | No | Choice | Fill blank | Calculations | Applied | $\begin{array}{\|c\|} \hline \text { No } \\ \hline 1 \end{array}$ | Choice | Fill blank | Calculations | Applied |
|  | 1 | 2 | ()$(\mathrm{V})$ | 5 | 6 | 1 | 4 | ( ) ( $\vee$ ) | 12 | $Q \quad \rho$ |  | 1 | 7 (seven) | 29 | C |  | 2 | 6,6 (six, six) | 787 | 54 wheels |
|  | 2 | 3 | $(\quad)(\vee)\left({ }^{\text {d }}\right.$ | 5 | 9 | 2 | 2 | $(\mathrm{l}, ~$ ) | 10 |  | 2 | 3 | circle | 90 | 4 bags, 1 oranges | 2 | 1 | 79 | 3 | 8 people |
|  | 3 | 1 | $(\vee)()()$ | 6 | 4 | 3 | 3 | $(\vee)(\quad)$ | 10 |  | 3 | 2 | 21 | 82 | 11 floor | 3 | 3 | B | 136 | 5 cakes |
|  | 4 | 3 | ()$(\mathrm{V})$ | 3 | 3 | 4 | 1 | $(\vee)(\quad)$ | 11 |  | 4 | 1 | 8 (eight) | 61 | 5:00pm | 4 | 4 | seven | 784 | 205 |
|  | 5 | 3 | $(\vee)()()$ | 4 | 6 | 5 | 4 | $(\vee)(\quad)$ | 9 |  | 5 | 4 |  | 65 | 21 books | 5 | 1 | $\underbrace{\text { 50. }}_{\substack{55(\text { Five hundred } \\ \text { fity) }}}$ | 8 | 688 dollars |
|  | 6 | 2 | $(\mathrm{V})$ | 2 |  | 6 | 2 | $(\vee)(\quad)$ | 11 |  | 6 | 1 |  | 3 | 17 (17 cylinder) | 6 | 3 | 1000 (one thousand) | 6 | 29 candies |
|  | 7 | 1 | $(\vee)(\quad)$ | 3 |  | 7 | 1 | $(\mathrm{l}, ~(\mathrm{~V})$ | 13 |  | 7 | 4 |  |  | not enough | 7 | 1 | quadrilateral | 4 | 3 groups |
|  | 8 | 3 | $(\vee)(\quad)$ | 5 |  | 8 | 3 | $(\vee)(\quad)$ | 12 |  | 8 | 2 | orange, 44 |  | No. 18 (18th) | 8 | 2 |  | 8 | 238 dollars |
|  | 9 | 2 | ()$(\vee)$ | 3 |  | 9 | 1 | $(\vee)(\quad)$ | 13 |  | 9 | 3 | apple, 16 |  | 6 (6 tens) | 9 | 4 |  | 18 | 5:13 |
|  | 10 | 1 | $(\mathrm{l})(\mathrm{V})$ | 9 | ( | 10 | 4 | $(\mathrm{l})(\mathrm{V})$ | 13 |  | 10 | 1 | 6 |  | 62 cm | 10 | 3 |  | 123 | 2 m |
| $\stackrel{\text { ® }}{\sim}$ | 1 | 3 | 10 | 3, 1 | $(\mathrm{l}, ~$ ) | 1 | 3 | $(\vee)\left({ }^{\text {r }}\right.$ | 16,5 | ( ) ( ) (v) | 1 | 3 | 89 | 312 | 28 people | 1 | 2 | 4/9 | 5 | 4 breads |
| $\stackrel{\rightharpoonup}{\text { m }}$ | 2 | 1 | 7 | 10, 3 | $(\vee)(\quad)$ | 2 | 1 | $(\mathrm{V})(\mathrm{V})$ | 3,5 | 35, 27 | 2 | 4 | 90 | 8 (eight) | 95 | 2 | 4 | 20 | 7 | 99 marbles |
| $\begin{gathered} \text { 区 } \\ \substack{0 \\ \hline} \end{gathered}$ | 3 | 2 | 8 | 4, 4 | 6 | 3 | 4 | $(\vee)(\quad)$ | 16, 4 | 20 | 3 | 1 | C, 21 | 80 | 2 (2 tens) | 3 | 3 | 430 | 387, 900 | 45 m |
| $\frac{\mathbb{O}}{\stackrel{0}{\top}}$ | 4 | 1 | 9 | 10, 3 | 18 | 4 | 3 | $(\mathrm{l}, ~$ ) | 12, 5 | 20 | 4 | 2 | B, 12 | 23 | 86 dollars | 4 | 1 | -, $\times$ | 7, 5, 5 | 42 trees |
| $\stackrel{\text { ¢ }}{\substack{\text { ¢ }}}$ | 5 | 2 | 11 | 1,5 | 5 | 5 | 2 | $(v)($ ) | 16, 2 | 12 | 5 | 1 | 7 | 18, 62 | July 31th | 5 | 3 | $x,+$ | 0, 2 | 849 |
|  | 1 | 1 | 6 | 2, 3 | 20 | 1 | 4 | 14 | 16, 7 | $(\vee)\left({ }^{\text {a }}\right.$ | 1 | 4 | 103, 79 |  | 17 matchsticks | 1 | 1 | 125, 200 | 67 | 3600 dollars |
| $\omega$ | 2 | 2 | 8 | 4,9 | 10 | 2 | 3 | 14 | 4, 2 | ()$(\vee)$ | 2 | 1 | 45 |  | 29 flowers | 2 | 2 | 484 | 7 | 33 candies |
| $\stackrel{\sim}{\sim}$ | 3 | 1 | 8 | 4, 3 | 6 | 3 | 2 | 15 | 15, 6 | 12 | 3 | 3 | 44 |  | 2 (2 tens) | 3 | 1 | 1/3 (4/12) | not enough | $81 \square$ |
| N | 4 | 3 | 9 | 6, 2 | 12 | 4 | 1 | 27 | 9, 3 | 24 | 4 | 2 | 15 |  | 274 cm | 4 | 3 | 20 | enough | older brother |
|  | 5 | 3 | 9 | 4, 3 | 40 | 5 | 1 | 18 | 17, 8 | 24 | 5 | 3 | 6 | $\bigcirc$ | 32th (No. 32) | 5 | 4 | 200 | 5 | 1/20 (50/1000) |
| Grade |  |  | Prim | ary 3 |  |  |  | Prim | ary 4 |  |  |  | Prim | ary 5 |  |  |  | Prim | ary 6 |  |
| item | No | Choice | Fill blank | Calculations | Applied | No | Choice | Fill blank | Calculations | Applied | No | Choice | Fill blank | Calculations | Applied | No | Choice | Fill blank | Calculations | Applied |
|  | 1 | 3 | 20.3 | 1/4 (5/20) | 4.4 cm | 1 | 1 | 11 | 4,2000 | 15.2 cm | 1 | 2 | 169 | 122 | $144 \mathrm{~cm}^{2}$ | 1 | 2 | 212 | 2.8 | $378 \mathrm{~cm}^{3}$ |
|  | 2 | 4 | 39/50 | 7 | 3/16 | 2 | 2 | 4 (four) | 11, 1 | $80 \mathrm{~m} \ell$ | 2 | 4 | 132 | 832 | 60 degree( ${ }^{\circ}$ ) | 2 | 2 | gray | 2250 | 14 |
| $\omega$ | 3 | 2 | 22,39 | 5.0 (5) | tomorrow 4:30 pm | 3 | 4 | A | 1 and 21/26 | 9900 m | 3 | 3 | 67 | 89 and 3/5 | 281.472 cm | 3 | 1 | 250 | 116 | 95 points |
| $\stackrel{\sim}{\square}$ | 4 | 1 | 5, 45, p | 0.2 | 28 g | 4 | 3 | second | 2419200 | 3840 dollars | 4 | 1 | $<$ | 1.534 | 13 hours 15 minutes | 4 | 3 | 200 | 5 and 17/20 | 88 ways |
| $\bigcirc$ | 5 | 3 | $<$ | 2250 | A | 5 | 3 | 30 (unchange) | 83 | 290000 dollars | 5 | 2 | $>$ | 613.529 | 19 hours 10 minutes | 5 | 4 | 250 | 3.9 (3 and 9/10) | 80 km |
| $\stackrel{( }{\square}$ | 6 | 2 | $>$ | 3128 | 10 routes | 6 | 2 | 6781234 | 97 | $108 \mathrm{~m}^{2}$ | 6 | 3 | 147 | 45 | 49 | 6 | 2 | 1, 0.5 | 18 and 1/10 | $(7,2)$ |
| $\frac{\overrightarrow{\mathbb{D}}}{0}$ | 7 | 3 | $<$ | 700 | 400 dollars | 7 | 4 | 731 | 15 | 1 | 7 | 1 | 255 | 34 and 15/49 | 3.5\% | 7 | 1 | 1.5 | 11 and 29/36 | 7 workers |
|  | 8 | 4 | = | 2500 | 7 Taxi | 8 | 1 |  | 8 | Class B, Class E | 8 | 2 | - | 20 and 5/9 | 1 hours 14 minutes ( 71 minutes) (71 minutes) | 8 | 4 | 1.5, 0.5 | 7.5 (7 and 1/2) | 0.3 kg |
|  | 9 | 1 | 26 | 160 | $300 \mathrm{~m} \ell$ | 9 | 2 |  | 35.2 | 82 pieces | 9 | 4 |  | 63 | 22500 dollars | 9 | 3 | Park | 720 | 126 eggs |
|  | 10 | 1 | 27 | 180 | $264 \mathrm{~cm}^{3}$ | 10 | 3 |  | 1.2 | 17.1 km | 10 | 3 |  | 350 | 275 cm | 10 | 2 | northeast | 531.5392 | $0.2 \ell(200 \mathrm{~m} \ell)$ |
| $\stackrel{\text { ® }}{+}$ | 1 | 4 | sixth, 187 | 1 (15/15) | 2,6 | 1 | 2 |  | 7,6 (seven, six) | 30 | 1 | 1 | 2047/2048 | 1 and 41/42 | 36 | 1 | 2 | $\bigcirc$ | 25.5 | 10.8 |
| $\stackrel{\rightharpoonup}{ \pm}$ | 2 | 2 | first, 148 | 0.7 | 100 times | 2 | 1 |  | 2 and 31/40 | 54000 km | 2 | 2 | B | 15 | 22 | 2 | 4 | 0 | 50 | 15 cars |
| 皆 | 3 | 1 | 13 | 5,5 | $2.5(2$ and $1 / 2)$ lieers | 3 | 3 |  | 0.14 | 11/18 | 3 | 3 | Jane | 27 | $18 \mathrm{~cm}^{2}$ | 3 | 1 |  | 32 | 9 |
| $\frac{7}{5}$ | 4 | 3 | 989 | 6, 4 | $432 \mathrm{~cm}^{2}$ | 4 | 1 |  | 120 | 77 sheets | 4 | 4 | John | 468.25 | 40 minutes | 4 | 4 |  | 992.5 | 1/256 |
| $\stackrel{\text { ¢ }}{\stackrel{\text { ® }}{\text { ® }}}$ | 5 | 2 | decrease | 4, 2 | 178 seconds | 5 | 4 |  | 2256 | 3 cups | 5 | 1 | short | 40 | 7.2 kiloliter | 5 | 3 |  | 4.553 | 24 types |
|  | 1 | 4 | 500 | B, 33 | 500 g | 1 | 2 | 1 and 1/10 | 1500 | $1.44 \mathrm{~m}^{2}, 6 \mathrm{~m}$ | 1 | 3 | 5 | 0.505 | 62.8 cm | 1 | 1 | 100 | 50 | 252 dollars |
|  | 2 | 3 | 29.4 | C, 31 | 60 degrees ( ${ }^{\circ}$ ) | 2 | 1 | 1 | 0 | $729 \mathrm{~cm}^{3}$ | 2 | 4 | 5 | 1 and 11/16 | 15 kg | 2 | 2 | 2 | 1/2 | $6000 \mathrm{~cm}^{2}$ |
| $\stackrel{(1)}{\sim}$ | 3 | 2 | 3 | A, 6 | A \$229, B \$189 | 3 | 4 | 1/10 | 8/9 | 2278 TV | 3 | 1 | 99 | 13 | 3 cm | 3 | 3 | 30 | 2/5 | 19 h 16 min |
| N | 4 | 3 | 0,55 | 45 | $12 \mathrm{~cm}^{2}$ | 4 | 1 | 11/60 | 1.96 | 2007 TV | 4 | 1 | 1,57 | 3 | $18 \mathrm{~cm}, 18 \mathrm{~cm}$ | 4 | 4 | 1/2 | 2.4, 1.8 | $225 \mathrm{~cm}^{2}$ |
|  | 5 | 1 | 15, 52 | 96 | 109 dollars | 5 | 3 | 1 and 5/6 | 588 | 17975 TV | 5 | 2 | 125 | 123 | 533 students | 5 | 2 | 5 (five) | 96 | 180 cm |

