AI TONG SCHOOL

2008

CONTINUAL ASSESSMENT 1

PRIMARY 6

MATHEMATICS

DURATION : 2 h 15 min

DATE : 29th February 08

INSTRUCTIONS

Do not open the booklet until you are told to do so.
Follow all instructions.
Answer all questions.

Name : _____ ( )

Class : Primary 6_____ Marks: 100

Parent's Signature : _____

Date : _____

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 How many eighths are there in $1\frac{3}{4}$?

(1) 6
(2) 7
(3) 12
(4) 14

2 The length of each side of a square is an odd number.
Which of the following can be the perimeter of the square?

(1) 8 cm
(2) 20 cm
(3) 24 cm
(4) 48 cm

3 Evaluate $8\frac{3}{5}$m − 1 m 40 cm?

(1) 666 cm
(2) 695 cm
(3) 720 cm
(4) 756 cm

4 Peter has three boxes of marbles. He has 38 marbles in the first box, 26 marbles in the second box and 44 marbles in the third box. What is the average number of marbles in each box?

(1) 36
(2) 38
(3) 54
(4) 108

The table below shows the number of children who had attended a sports programme in school.

Age	Number of Children
9	8
10	14
11	16
12	15

Study the table carefully and then answer questions 5 and 6.

5 How many children aged 9 and 10 years old attended the programme?

(1) 8
(2) 14
(3) 19
(4) 22

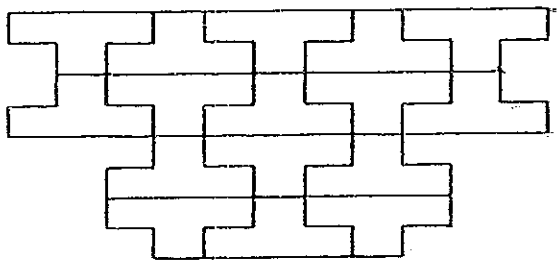
6 How many more 12-year-old than 9-year-old children attended the programme?

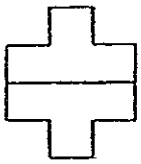
(1) 1
(2) 2
(3) 7
(4) 8

7 Express the ratio of 20 cm to 6 m in its simplest form.

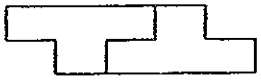
(1) 1 : 3
(2) 1 : 30
(3) 3 : 1
(4) 10 : 3

8 In the diagram below, find the unit shape that forms the tessellation.



(1) 

(2) 

(3) 

(4) 

9 The mass of Adrian, Betty and Chan Wee are in the ratio of 4 : 2 : 5. If the mass of Adrian is 48 kg, what is the total mass of the Betty and Chan Wee?

(1) 24 kg
(2) 60 kg
(3) 84 kg
(4) 132 kg

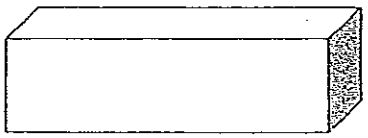
10 The ratio of the length of a rectangle to that of its breadth is 4 : 3. Find its perimeter in terms of p if its length is $16p$ cm.

(1) $12p$ cm
(2) $16p$ cm
(3) $28p$ cm
(4) $56p$ cm

11 Ranjit spent $\frac{2}{3}$ of his money on clothes and $\frac{1}{4}$ of the remainder on food. How much did he spend if he had \$24 left?

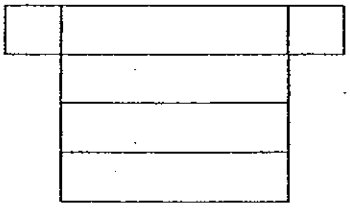
(1) \$18
(2) \$24
(3) \$72
(4) \$264

12 The solid below is formed by four rectangular faces and two square faces.

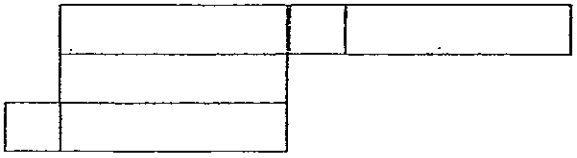


Which of the following is **not** the net of this solid?

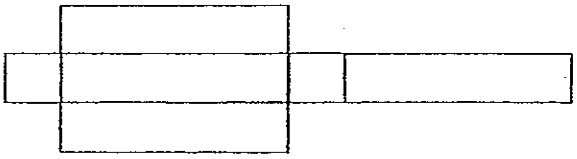
(1)



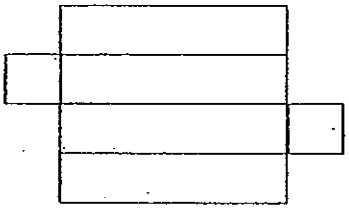
(2)



(3)



(4)



13 The table below shows the types of food a group of 40 children enjoyed.

Type of Food	Number of Children
Burgers	?
Chicken Wings	10
Ice Cream	8
Satay	6
Vegetables	5

How many children enjoyed burgers and Satay?

(1) 10
(2) 11
(3) 17
(4) 29

14 Brian has 144 coins. The ratio of the number of 10-cent, 20-cent and 50-cent coins is 5 : 4 : 3 respectively. What is the value of all the 20-cents coins Brian has?

(1) $4.80
(2) $9.60
(3) $18.00
(4) $33.60

15 8 years ago, Su Lin was b years old. Now, her brother is 6 years younger than she is. What would their total age be in 5 years' time?

(1) $(b + 8)$ years old
(2) $(b + 11)$ years old
(3) $(2b + 10)$ years old
(4) $(2b + 20)$ years old

Name: _____ ( )

Class: Primary 6 _____

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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16 238×58 is equal to $238 \times 60 - 238 \times \square$.
What is the missing number in the box?

Ans: _____

---

17 What fraction of 5 kg is 450 g?
Express your answer in its simplest form.

Ans: _____

---

18 What is **8 tenths and 27 hundredths** written as a decimal?

Ans: _____

---

19 Osman is 1.6 m tall when his height is rounded to 1 decimal place. He is shorter than 1.6 m. Write down one possible value for his height in centimetres.

Ans: _____ cm

---

20 Farmer Terry put a square fence around his vegetable garden. One side was 10 m in length. He used posts to hold the fence. If the posts were placed 2 m apart, how many posts did he use?

Ans: _____

21 The cost of 12 pens is $48. What is the cost of 60 pens?

Ans: $_____

22 In the table below, Miss Devi recorded the number of books her pupils borrowed the previous week.

No. of books	0	1	2	3	4
No. of pupils	5	8	18	7	5

How many pupils borrowed at least 2 books?

Ans: _____

23 The average of 5 numbers is 10. When a 6th number is added, the average becomes 12. What is the 6th number?

Ans: _____

---

24 There are 80 students in a class. 54 of them are Chinese. What percentage of the students is of the other races?

Ans: _____ %

---

25 Simplify $8h + 4 - 2h - 3$

Ans: _____

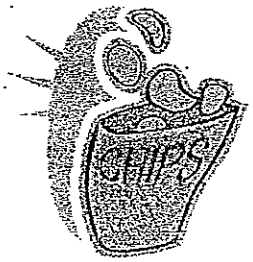
10

Questions 26 to 35 carry 2 marks each. Show your working clearly in the space below each question and write your answers in the spaces provided. For questions which require units, give your answers in the units stated. (20 marks)

26 $\frac{1}{4}$ of the workers in a factory are women. When 26 men join the factory, there are 238 workers altogether. How many women are there in the factory?

Ans: _____

27



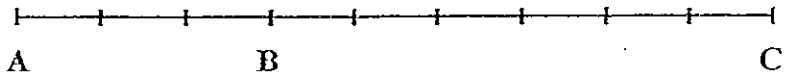
Normal Price : $3.20 per packet
Sale Price : $2.40 per packet

During a sale, Taufik bought 8 packets of chips. How many packets fewer would he get had he bought with the same amount of money during a non-sale period?

Ans: _____

28 A line of length 4 units is divided into nine equal segments. Write down a fraction to describe the length AB.

Length = 4 units



Ans: _____

6

29 The table below shows a pattern of numbers.

	Column A	Column B	Column C	Column D	Column E	Column F
Row 1	1	2	3	4	5	6
Row 2	7	8	9	10	11	12
Row 3	13	14	15	16	17	18

In which column and row will the number 827 appear?

Ans: Column _____, Row _____

30 Below is a recipe for making cookies.

Butter Cookies
To make 8 cookies 100 g flour 150 g butter 50 g sugar

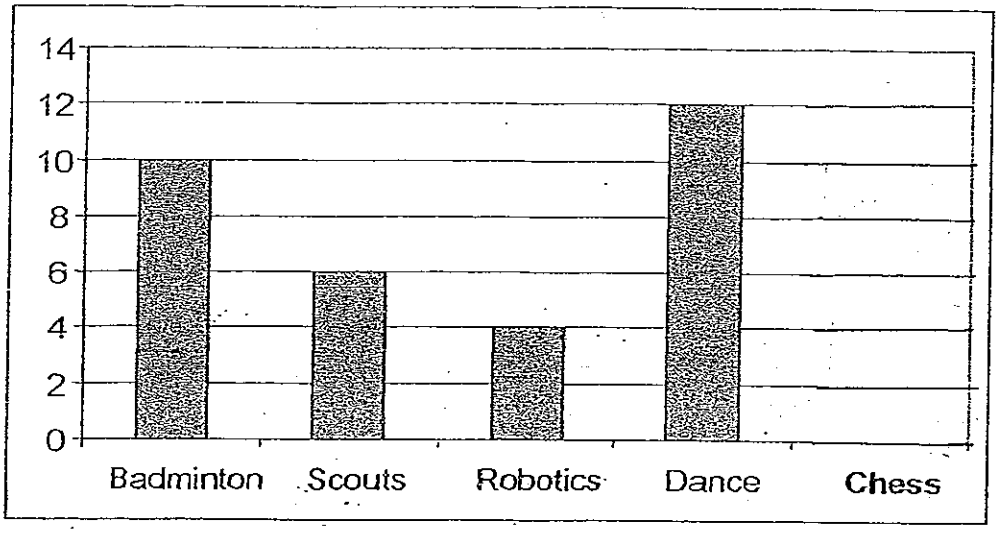
Mrs Lee has 1 kg of flour, $\frac{1}{2}$ kg of butter and 150 g of sugar. How many cookies can she make at most?

Ans: _____

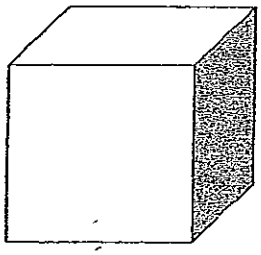
4

12

31 The bar graph below shows the various CCAs taken up by the students in a class. Given that there are 8 students in **Chess** CCA, **draw** on the given bar graph below to show this data.



32. The volume of a cube is 64 cm^3. Find the area of the shaded face.

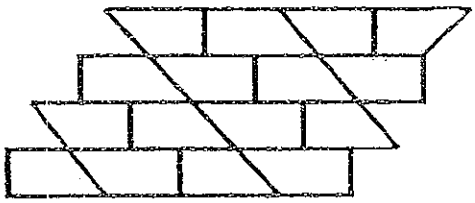


Ans: _____ cm^2

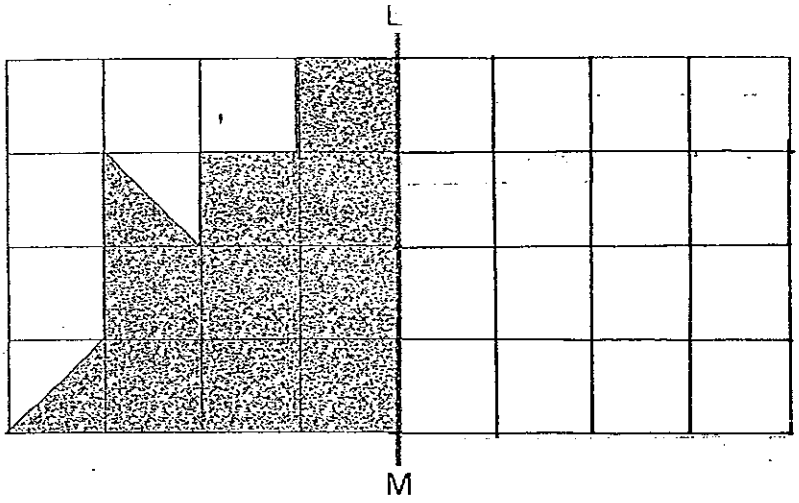
4

33 The shape  can be tessellated.

One of the shapes does not fit into the tessellation shown below. Shade it.



34 Complete the following figure given that LM is the line of symmetry.



35 Ti Wen and Si Qi shared $98. Ti Wen received $18 more than Si Qi. What is the ratio of Si Qi's share to Ti Wen's share?

Ans: _____

6

14

For questions 36 to 48, 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)

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36 The magician said, "The average of seven numbers is 49. If 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, what is the new average?"

Ans: _____ [3]

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37 The table below shows the rate a shop charges for its photocopying services.

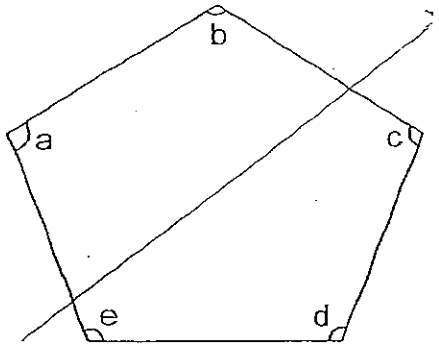
Number of Pages	Cost Per Page (cents)
First 200 pages	4
Subsequent pages	3

Jason has a set of worksheets which consists of 250 pages. If he photocopies 3 sets of the worksheets, how much does he have to pay in all?

Ans: _____ [3]

6

38 Find the sum of $\angle$ a, $\angle$ b, $\angle$ c, $\angle$ d and $\angle$ e. The diagram is not drawn to scale.



Ans: _____ [3]

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39 The ratio of the cost of an air ticket to Thailand to the cost of an air ticket to London is 1 : 5. The ratio of the cost of an air ticket to Japan to the cost of an air ticket to London is 1 : 2. Find the cost of an air ticket to Japan if it cost $300 to fly to Thailand.

Ans: _____ [3]

6

16

18

40 Jason's age is $\frac{1}{5}$ of Tiffany's age. Tiffany will be 27 years old in 2 years' time. In how many years time will Tiffany's age be $1\frac{1}{2}$ times of Jason's age?

Ans: _____ [4]

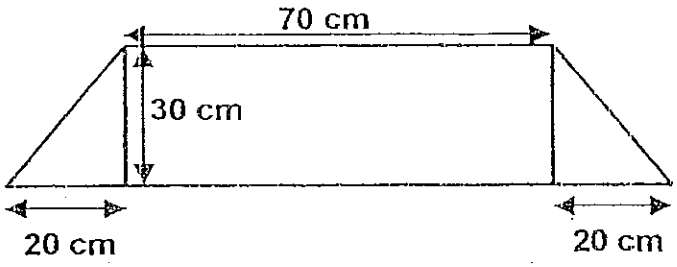
---

41 Mandy, Nancy and Oliver have a total height of 5.08 m. Nancy is 7 cm taller than Mandy. Oliver is 0.21 m taller than Mandy. Find the height of Oliver.

Ans: _____ [4]

8

42 Two carpenters decided to design desktops for students at the Junior High School. The dimensions of the desktop are shown below. How much wood would they need for 30 desktops? The diagram is not drawn to scale.



Ans: _____ [4]

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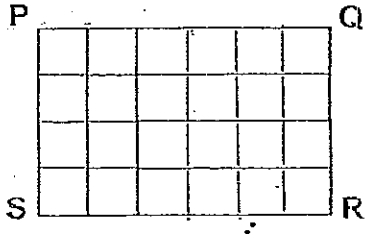
43 In the figure below, PQRS is formed by 6 similar rectangles as shown. If the area of PQRS is 864 cm^2, find the perimeter of one such rectangle.



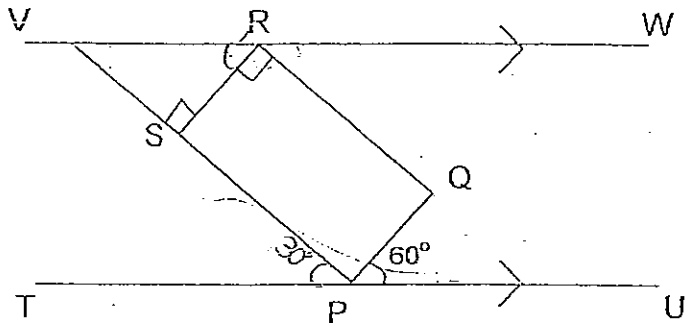
Ans: _____ [4]

8

44 In the figure below (not drawn to scale), PQRS is a rectangle, and TPU is parallel to VRW. Given that $\angle QPU = 60^\circ$, find

a) $\angle SPT$

b) $\angle SRV$



Ans: (a) _____ [1]

(b) _____ [3]

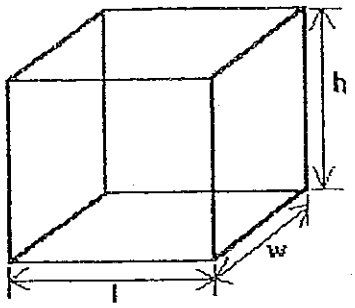
---

45 A rectangular tank 90 cm long, 50 cm wide and 50 cm high was 80% full of water. Water began to leak from a crack at the base of the tank at the rate of 500 cm^3 per minute. At the same time, water was also added into the tank from a tap at the rate of 3.5 litres per minute. How long did it take to fill the tank completely with water?

Ans: _____ [4]

8

46 A cereal company decided to increase the height of its boxes by 30 percent and reduce the width in order to maintain the same volume.



If at first, length = 20cm

height = 40cm

width = 30cm,

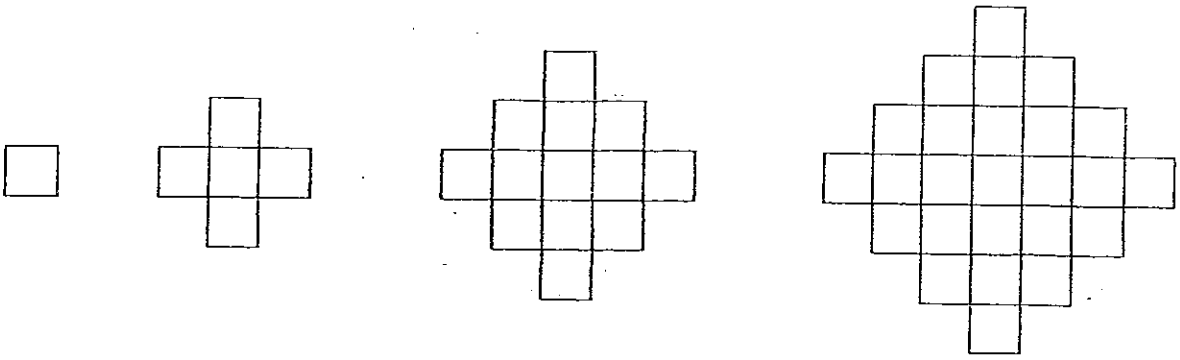
what will the new height and width be if its length stays the same?

Ans: H _____ [2]

W _____ [2]

4

47 The patterns below start with a single square. At each stage new squares are added all round the outside.



Stage 1 Stage 2 Stage 3 Stage 4

(a) Complete the table below:

Stage	1	2	3	4	5
Number of squares	1	5	13	25	

(b) How many ~~small~~ squares are there by the time you get to the 10th stage?

(c) How many squares are there by the time you get to the 100th stage?

Ans: (a) _____ [1]

(b) _____ [2]

(c) _____ [2]

5

48 Alvin, Beth and Caleb had some marbles in the ratio 3 : 1 : 4 respectively. Caleb gave 40% of his marbles to Alvin and Beth. As a result, Alvin had 90 more marbles than Caleb and Beth had 70% more marbles than before.

(a) What was the percentage increase of Alvin's marbles after receiving marbles from Caleb?

(b) How many marbles did Caleb have at first?

(a) _____ [2]

(b) _____ [3]

~~END OF PAPER~~

Please check your work carefully.

5

ANSWER SHEET

EXAM PAPER 2008

SCHOOL : AITONG PRIMARY SCHOOL
SUBJECT : PRIMARY 6 MATHEMATICS

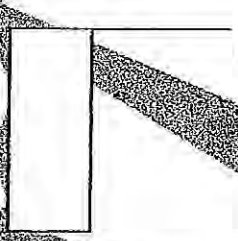
TERM : CA 1

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

16)2 **17)9/100** **18)1.07** **19)156cm** **20)20 posts**

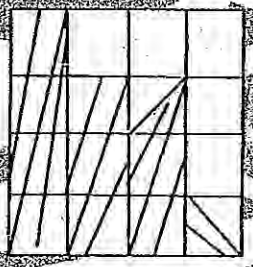
21)$240 **22)20 pupils** **23)22** **24)32.5%** **25)6h+1**

26)53 women **27)2 packets fewer** **28)4/3** **29)E,138**

30)24 cookies **31)**  **8** **32)16cm²**

Chess

33) 

34) 

23

35)20:29 36)53 37)$24.50 38)540 39)$750

40)27 − 2 =25
25 ÷ 5=5
1u→5
4u→5x4=20
3u→20x3=60
60 − 25=35
Ans:35 yrs time

41)0.21m=21cm
21cm+7cm=28cm
5.08m=508cm
508cm − 28cm=480cm
480cm ÷ 3=160cm
160cm+21cm=181cm
=1.81m

42) ½ x20cmx30cm=300cm$_2$
30cmx70cm=2100cm$_2$
2100cm$_2$+300cm$_2$+300cm$_2$=2700cm$_2$
2700cm$_2$x30=81000cm$_2$

43)24□→864

1□→$\frac{864}{24}$ =36

6+24+6+24=60cm

44)a)<SPT=180° -60° -90° =30°

b)180° -30° -90° =60°

45)90cmx50cmx50cm=225000cm_3

=225L

$\frac{480}{100}$ x 225 =180L

500cm_3=0.5L

3.5L-0.5L=3L

225L-180L=45L

45L÷3L=15min

46)H→$\frac{130}{100}$ x 40 =52cm

20cmx40cmx30cm=24000cm_3

52cmx20cm=1040cm_2

W⇒24000cm_3÷1040cm_2=23 $\frac{80}{1040cm}$

=23 $\frac{8}{104cm}$

=23 $\frac{4}{52\ cm}$

=23 $\frac{1}{13\ cm}$

47)a)41

b)181

c)19801

48)a)A : B : C
3 : 1 : 4
30 :10:40

A&B→40% of 40=16
B→70% of 10=7
A→16-7=9
% increase→ $\frac{9}{30}$ x 100%

=30%

b)39-24=15u
15u→90
1u→6
40u→40x6=240

---end---