



Maha Bodhi School
2010 Preliminary Examination
Mathematics

Name : _____ () Date : 24 August 2010

Class : Pr 6 _____ Total time for Booklets A and B : 50 min

You will find Pages 1 to 8 in this Booklet

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)
You are NOT allowed to use a calculator.

1. In which one of the following numbers is the value of the digit in the hundreds place twice that of the digit in the tens place?

- (1) 1542
- (2) 2154
- (3) 4215
- (4) 5124

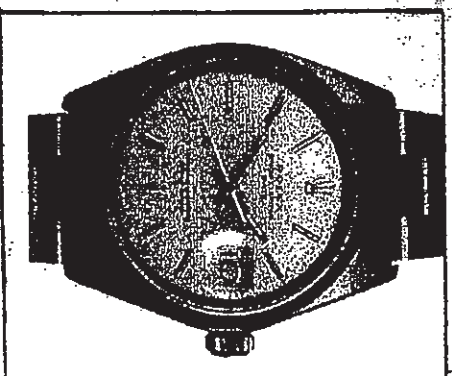
2. Wei Quan has the same number of \$10-notes and \$50-notes.
What fraction of his money is half of his \$10-notes?

- (1) $\frac{1}{12}$
- (2) $\frac{1}{11}$
- (3) $\frac{1}{5}$
- (4) $\frac{1}{2}$

3. Each \$1 coin has a mass of 6.5 g and each 20¢-coin has a mass of 4.5 g. Jia Hui has as many \$1-coins as 20¢-coins. The 20¢-coins add up to \$4. What is the mass of his \$1 coins?

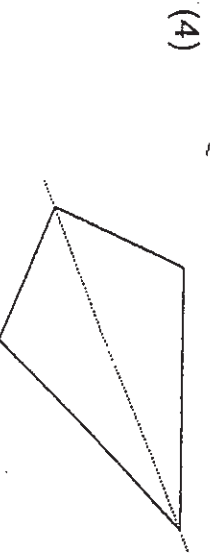
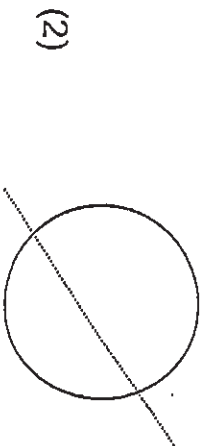
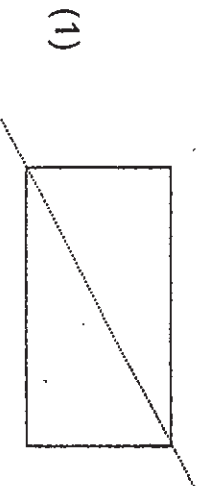
- (1) 26 g
- (2) 90 g
- (3) 130 g
- (4) 220 g

4. While Mr. Ali was driving, he looked at his watch as shown on the right. It would take him another 15 minutes to reach his destination. By then he would be late for his appointment by half an hour. What time was his appointment?

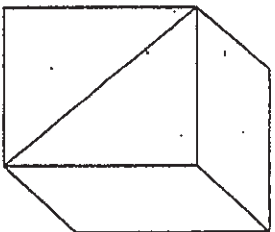


- (1) 1.35 p.m.
- (2) 1.50 p.m.
- (3) 2.05 p.m.
- (4) 2.35 p.m.

5. Which one of the dotted lines is a line of symmetry of the geometrical figure shown?

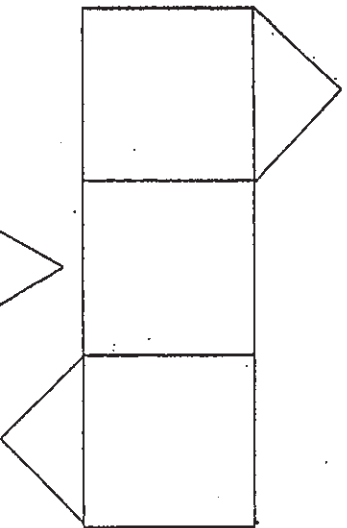


6.

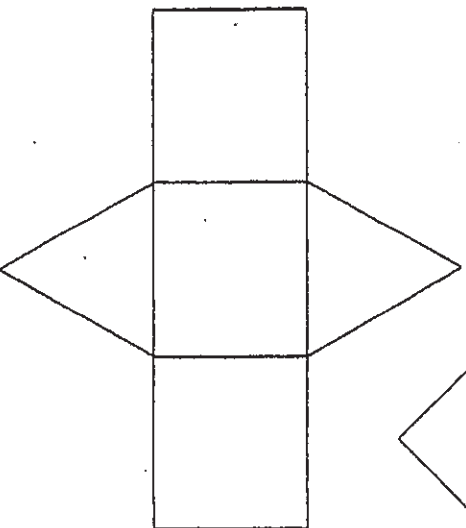


The cube shown above is made up of two identical solid figures.
Which one of the following is the net of the solid figure?

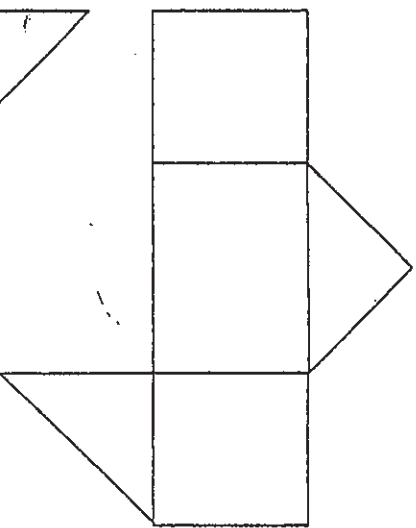
(1)



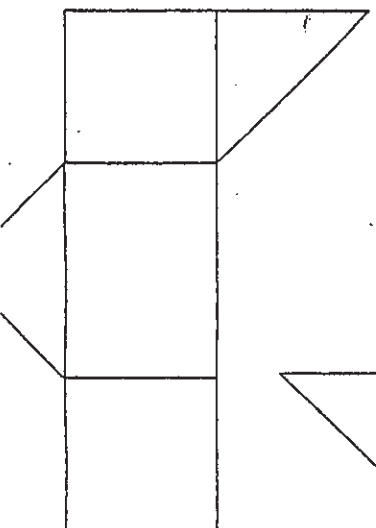
(2)



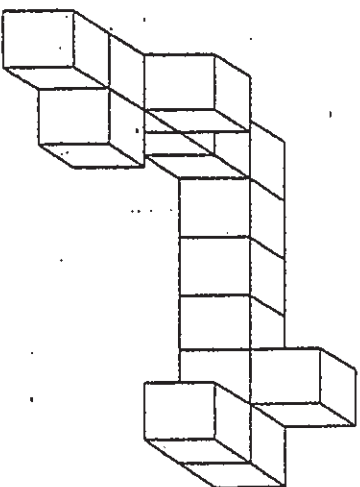
(3)



(4)

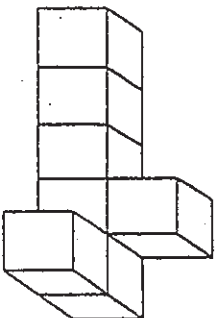
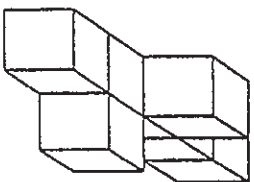


7.

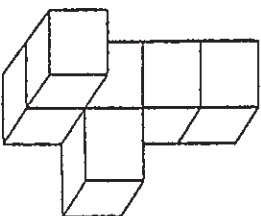
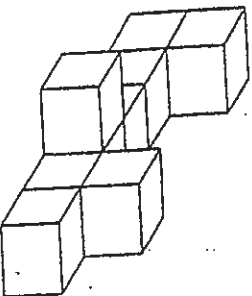


Which two solid figures when placed together will form the one shown above?

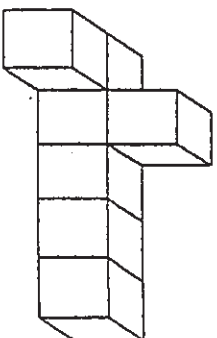
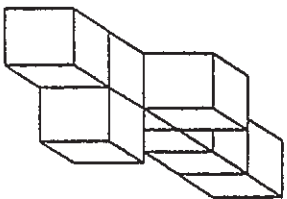
(1)



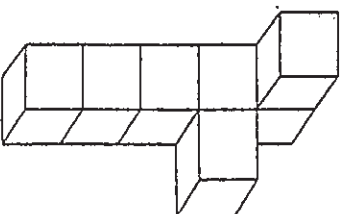
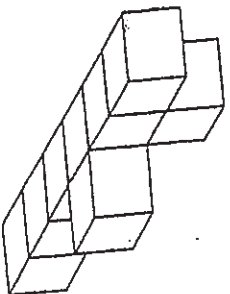
(2)



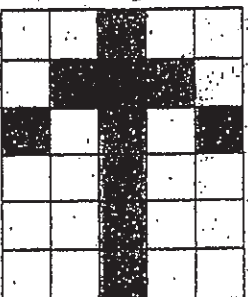
(3)



(4)



8.



If another 20% of the number of shaded squares are shaded, what would be the ratio of the number of shaded squares to that of the unshaded ones in the board shown above?

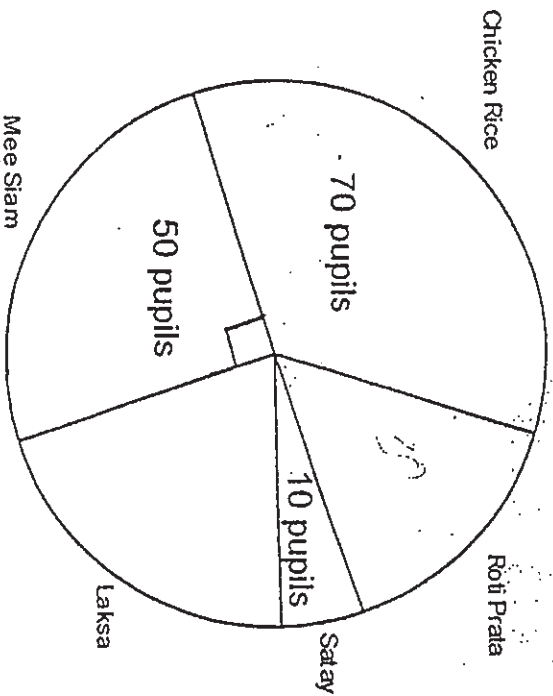
- (1) 1 : 2
- (2) 2 : 3
- (3) 3 : 5
- (4) 7 : 8

9.

Before a printer starts printing, it needs to warm up. Xiuli wants to print a 70-page document. Which printer will be the first to print out the whole document?

Printer	Warm-up time	Printing speed
(1) P	1 min	10 pages per minute
(2) Q	3 min	15 pages per minute
(3) R	5 min	25 pages per minute
(4) S	6 min	40 pages per minute

10. Some pupils in the school were asked to pick the food that best represents Singapore. The result of the survey is shown in the pie chart below:



How many percent of the children picked roti prata?

- (1) 40 %
- (2) 30 %
- (3) 20 %
- (4) 15 %

11. The cost to print a banner depends on the size of the banner. It also includes a fixed processing fee. A banner 5 m long and 3 m wide costs \$75 to print. Another banner 4 m long and 2 m wide costs \$47 to print.

How much is the fixed cost?

Fixed processing fee

- (1) \$ 15
- (2) \$ 19
- (3) \$ 28
- (4) \$ 32

12. Shuqi was given \$20 on Sunday. She brought all her money to school in her wallet and recorded the amount left at the end of each day in the table below. Study it before answering Question 12.

Monday	Tuesday	Wednesday	Thursday	Friday
\$16	\$14	\$10	\$7	\$5

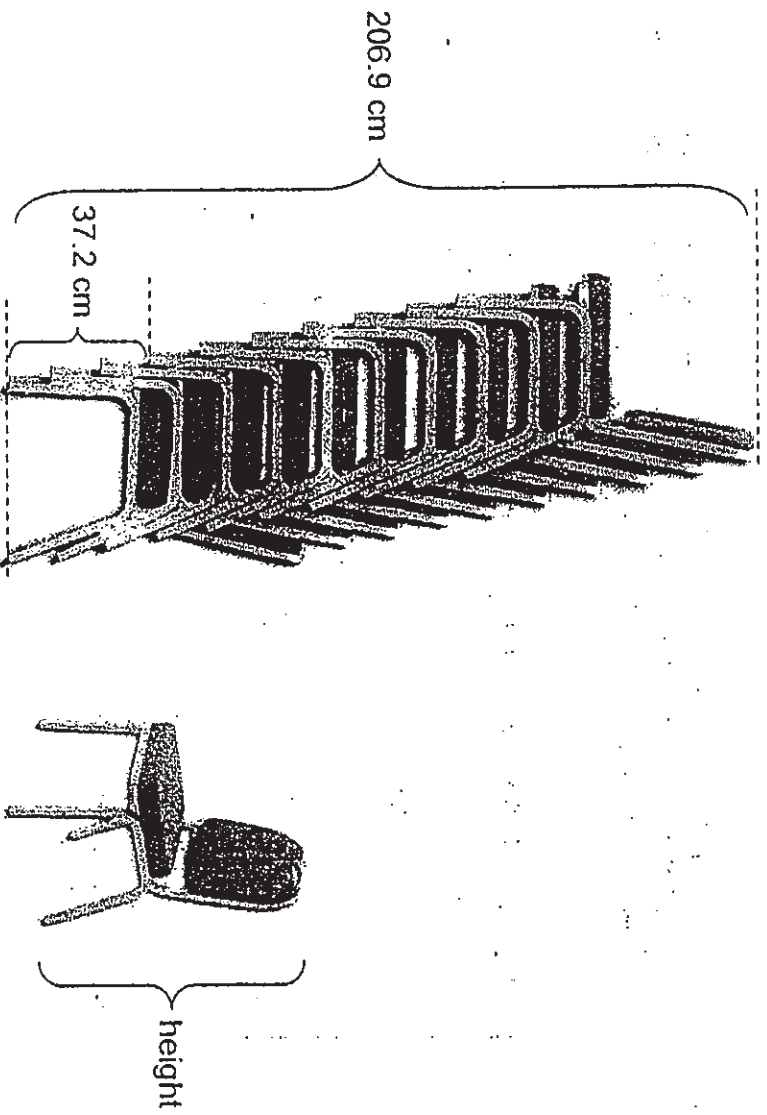
On which two days did Shuqi spend the same fraction of the money she had on each of the respective days?

- (1) Tuesday and Friday
- (2) Monday and Wednesday
- (3) Wednesday and Friday
- (4) Monday and Thursday

13. Wei Jie has a piece of cardboard. He realized that he could only cut out a maximum of 8 circles of diameter 7 cm each from it. What is the likely dimension of his piece of cardboard?

(Take $\pi = \frac{22}{7}$)

- (1) 77 cm by 16 cm
- (2) 28 cm by 11 cm
- (3) 30 cm by 15 cm
- (4) 56 cm by 28 cm



14. After the school attendant had stacked up 10 chairs in the Conference Room after a meeting, he noticed 3 things. Firstly, each chair was stacked the same height above the other. Secondly, the foot of the 4th chair was 37.2 cm above that of the first. Thirdly, the chairs reached a height of 206.9 cm. What is the height of each chair?

- (1) 82.9 cm
- (2) 95.3 cm
- (3) 113.9 cm
- (4) 123.2 cm

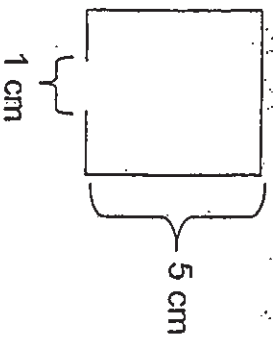
15. If Mr Tiong drove at 60 km/h, he would reach Town V at 1 p.m. If he had driven at 80 km/h, he would have reached Town V at 12.30 p.m. One day, Mr Tiong decided to drive at 100 km/h to Town V. How long did he take to reach Town V?

- (1) 60 minutes
- (2) 72 minutes
- (3) 90 minutes
- (4) 96 minutes

19. Sri has as twice as many 5¢-coins as 20¢-coins. They add up to \$3. How many coins does Sri have?

Ans: _____ coins

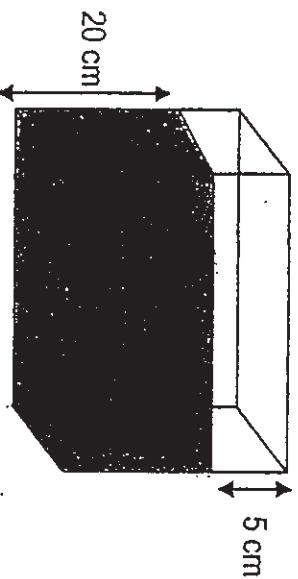
20. Likai tried to form a square of sides 5 cm. But the wire was too short and there was a gap of 1 cm. He then used the wire to form an equilateral triangle instead. Find the length of each side of the triangle he formed.



(Diagram is not drawn to scale)

Ans: _____ cm

21. The tank shown above was originally filled completely with water. After 2 full jugs of water were removed from it, the water level fell by 5 cm to 20 cm. How many more jugs of water can half of the remaining water in the tank fill?



Ans: _____ jugs

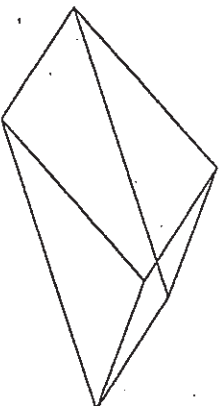
22.



ABCD is a rectangular piece of paper and P is a point on BC. If the paper is folded along PD such that C now lies on AD directly under P, find $\angle BPD$.

Ans: _____

23. The solid figure shown above is made of glass. Name the solid figure.



Ans: _____

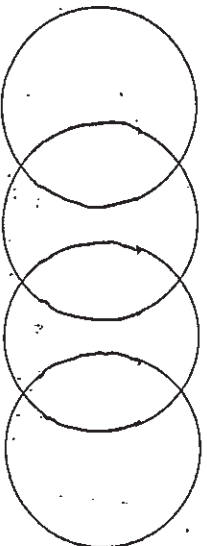
24. Sally is 18 years old now and her mother is 3x years older than she is. How old will her mother be when Sally is thrice her current age?

Ans: _____ year(s) old

25. For every \$2 that I get to bring to school each day, my sister gets \$1 more. My mother gives us \$30; how much does my sister get?

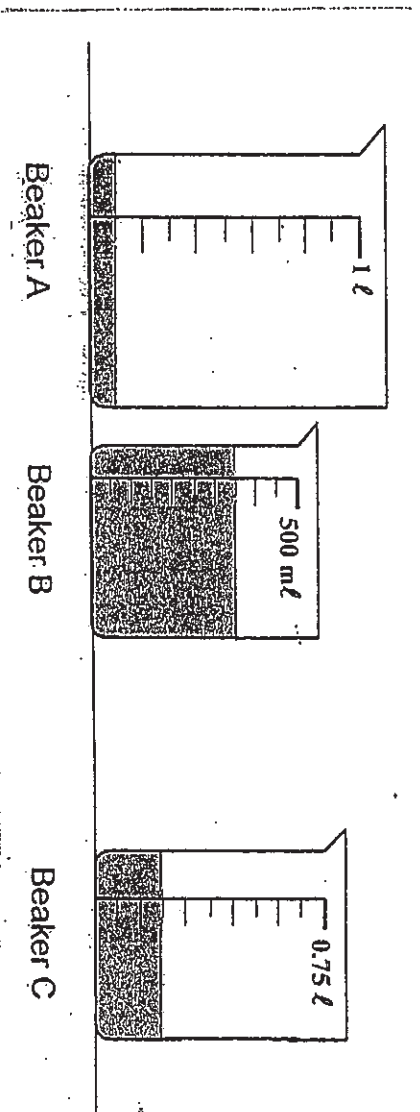
Ans: \$ _____

Questions 26 to 30 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. (10 marks) You are NOT allowed to use a calculator.

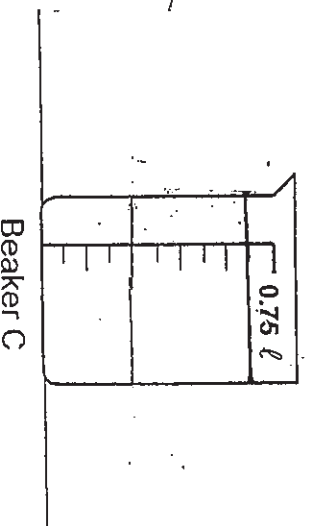


26. The figure above consists of 4 identical circles. $\frac{2}{7}$ of each circle overlaps the one before. What fraction of the figure is one circle?

Ans: _____

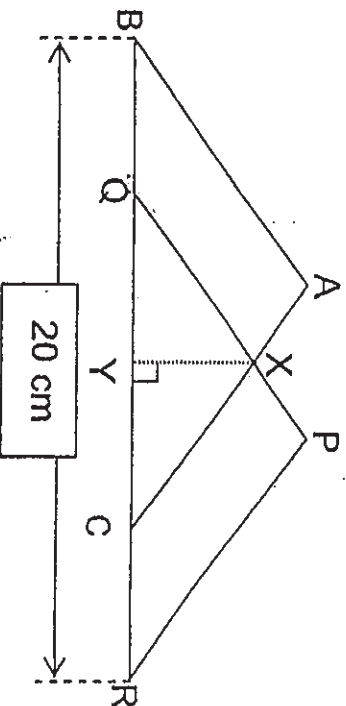


27. During a Science experiment, Tuck Wei poured the liquids in Beakers A and B into Beaker C. In the diagram below, draw a line to show the volume of liquid in Beaker C finally. Remember to use a pencil and a ruler.



28.

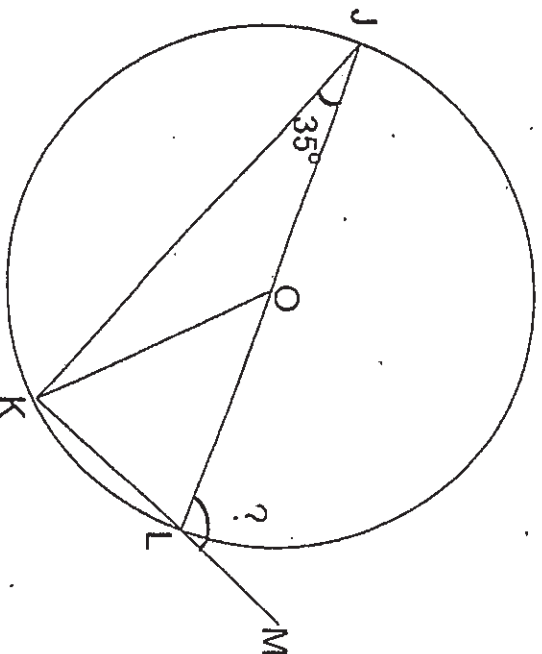
ABC and PQR are identical isosceles triangles.
 $BR = 20$ cm and YC is 1 cm longer than XY .
 Find the area of triangle XQC if $CR = 4$ cm



Ans: _____ cm^2

29.

In the diagram below, not drawn to scale, JL , OK and KM are straight lines. Given that O is the centre of the circle and that $\angle LJK = 35^\circ$, find $\angle OLM$.



Ans: _____ $^\circ$

30. After 40% of the boys in a club had been promoted to secondary school, there were as many boys as girls left in the club. What percentage of the pupils in the club were girls originally?

Ans: _____ %



Remember to check your work
Every mark counts.
--End of Paper--



Paper 1	
Booklet A (20 marks)	
Booklet B (20 marks)	
Paper 2	
Q1 – 5 (10 marks)	
Q6 - 18 (50 marks)	
Total (100 marks)	

Name : _____

Class : Pr 6 _____

Total time : 1 hour 40 min

Date : 24 August 2010

Parents' Signature: _____

You will find Pages 1 to 16 in this Booklet

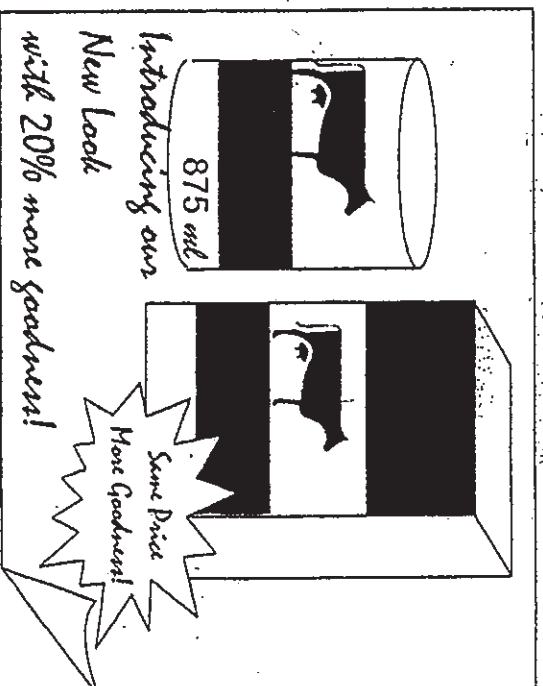
PAPER 2

Questions 1 to 5 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. (10 marks)
You are allowed to use a calculator.

1. The total mass of Ali, Baljit and Charlie is thrice that of Dollah's.
Ali's mass is the same as the combined mass of Baljit and Charlie.
If the average mass of the four boys is 47 kg, find Ali's mass.

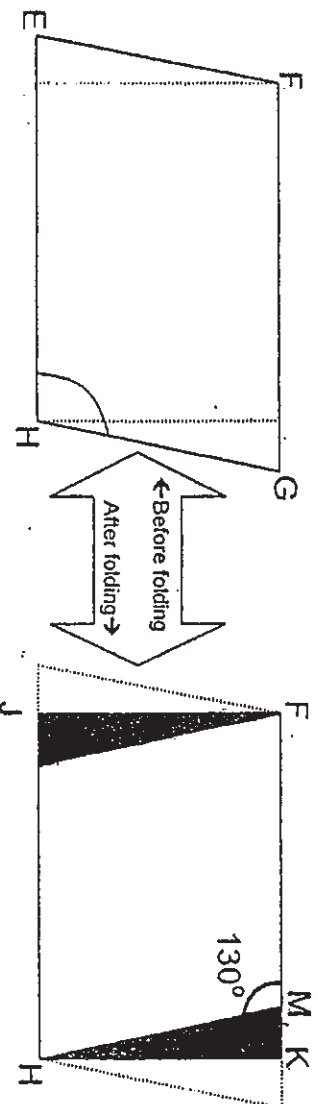
Ans: _____ kg

2. Find the capacity of the Moo Moo Milk in its new packaging.
Express your answer in litres.



Ans: _____ litres

3. EFGH is a parallelogram which was folded along the dotted lines to form the rectangle FKHJ. The two shaded triangles are the flaps formed after the folding.
Given that $\angle FMH = 130^\circ$, find $\angle GHE$.



Ans: _____^o

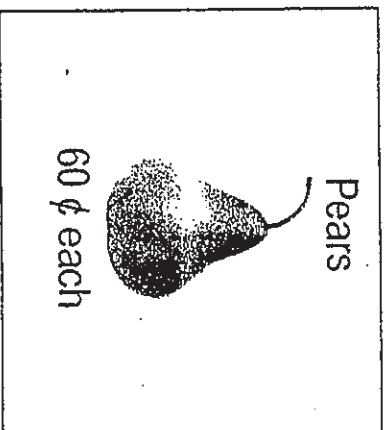
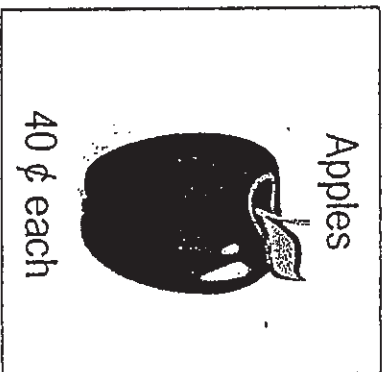
4. There was half a box of biscuits left. Father ate twice as many pieces of biscuit as Sister. I ate the remaining 5 pieces. If Father ate 4p pieces, how many pieces of biscuits were there in a full box?

Ans: _____ pieces

5. Jia Hui went shopping with twice as many \$10-notes as \$50-notes. She then bought a blouse with half of her \$10-notes. What is the ratio of the amount of money she had left to that she had originally?

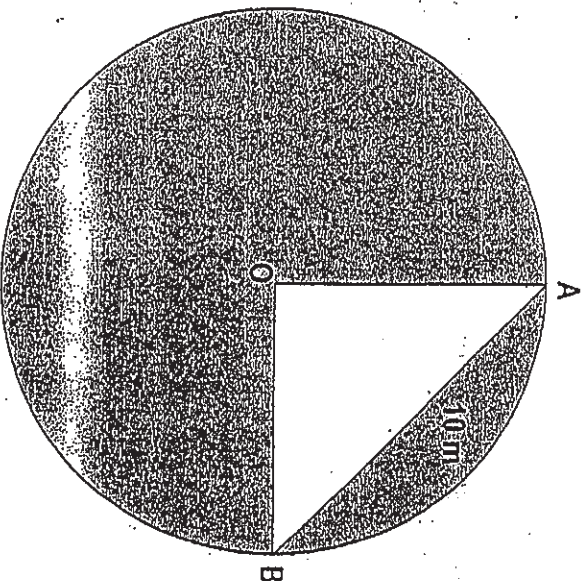
Ans: _____

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)
You are allowed to use a calculator.



6. Mrs Gopal and Mrs Ari went to the supermarket. Both women decided to spend all their money on either apples or pears and they would not buy the same fruit.
If Mrs Gopal bought only pears, she would have 9 more fruit than Mrs Ari.
If she bought only apples, she would have 41 more fruit than Mrs Ari.
How much more money has Mrs Gopal than Mrs Ari?

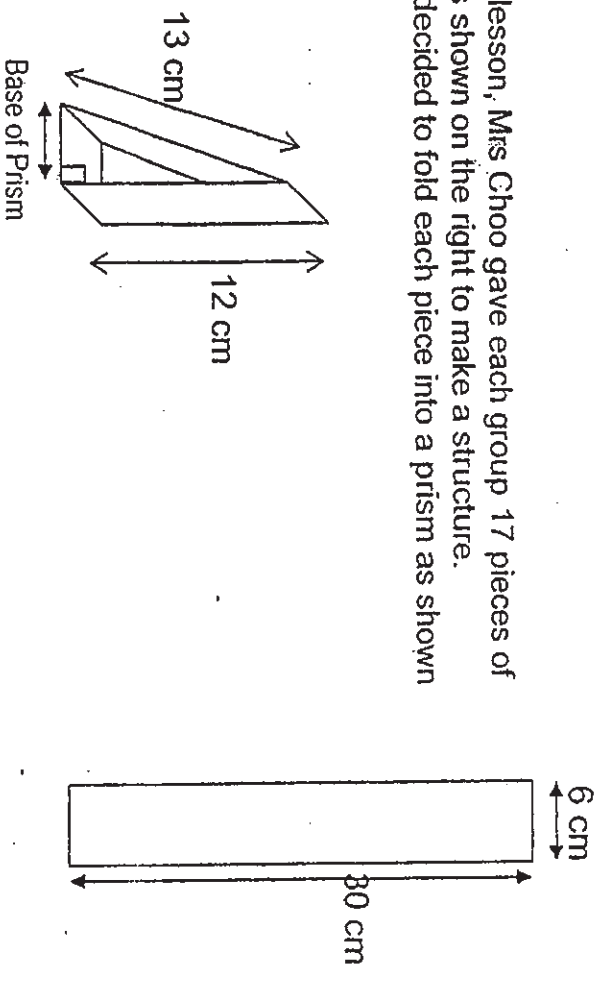
Ans: _____ [3]



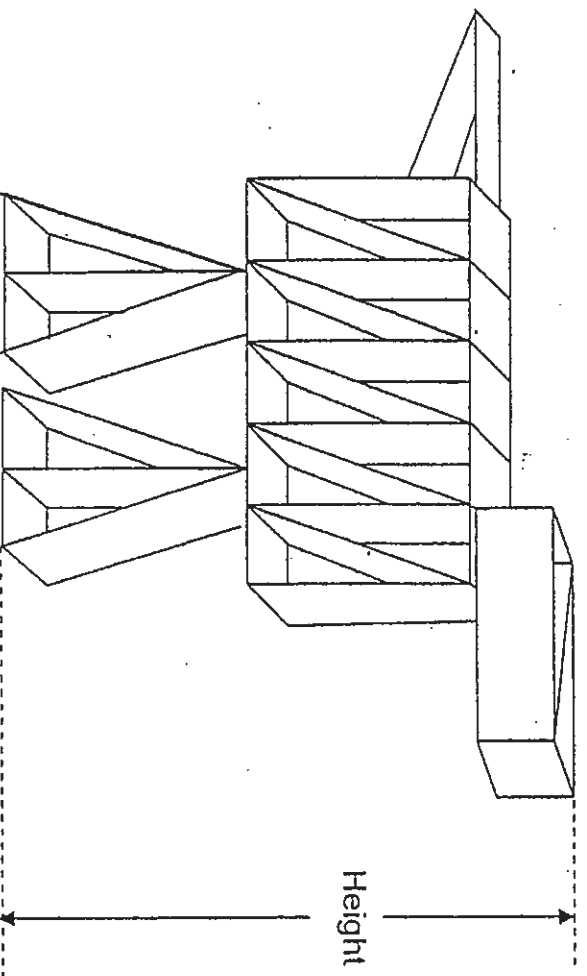
7. In the diagram shown above, O is the centre of the circle and OAB is a right-angle triangle.
Given that AB is 10 m and the shaded parts of the circle add up to 133 m^2 , find the area of the circle.

Ans: _____ [3]

8. During an Art lesson, Mrs. Choo gave each group 17 pieces of cardboards as shown on the right to make a structure. John's group decided to fold each piece into a prism as shown below:



His group glued all the 17 prisms together to form the structure shown below.

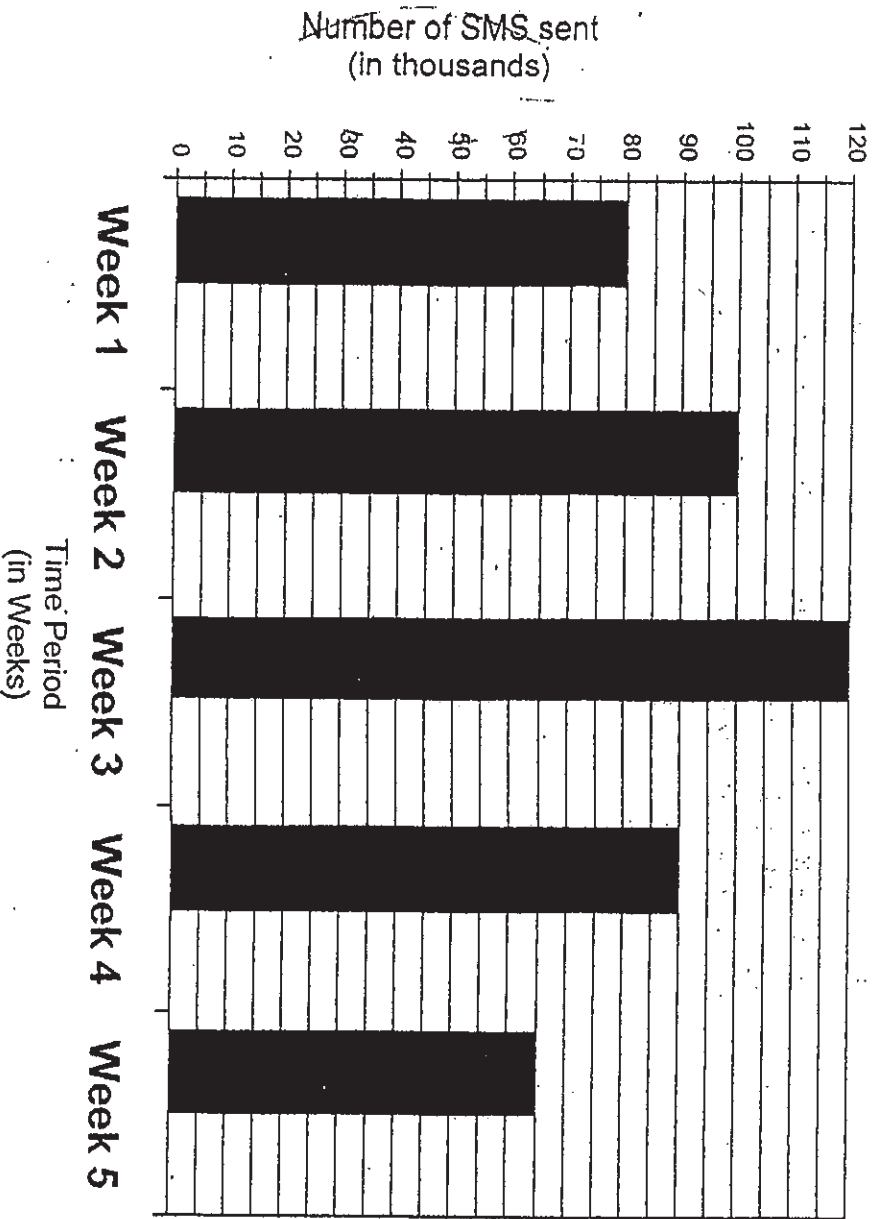


- (a) What is the length of the base of the prism?
(b) What is the height of the structure?

(a) _____ [1]

(b) _____ [2]

The graph below shows the number of SMS messages sent by student subscribers in the first 5 weeks of 2010 of a particular telco. Study it carefully and answer Q9.



9. Based on the information provided in the graph, answer the following questions:

- (a) In which week was there a 25% decrease in the number of SMS messages sent from the week before?
- (b) Calculate the average number of SMS messages sent in the first 4 weeks of 2010.

Ans: (a) _____ [1]

(b) _____ [2]

10. Joanne and Tomomi bought the same bag from the same shop when they went shopping together. Joanne spent 75% of her money on the bag and Tomomi spent $\frac{2}{3}$ of hers.
- What percentage of their total sum of money was the cost of a bag if the girls had \$100 left altogether?
(Round off your answer to the nearest tenth.)

Ans: _____ [3]

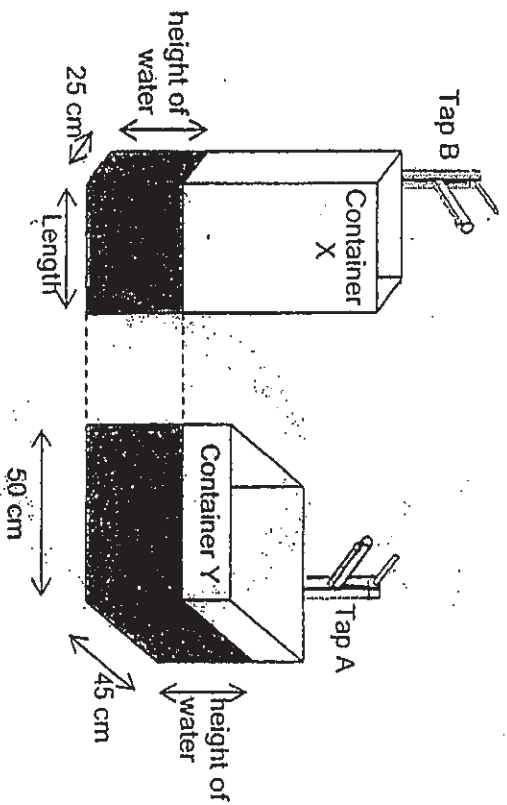
11. When both Machines P and Q are used, a book can be printed in 5 hours.
While printing a book, Machine P broke down.
As a result, it took 7 hours to complete the printing of the book.
If it would take Machine Q 8 hours 20 minutes to print the book alone,
- (a) how long was Machine P used before it broke down?
 - (b) how long would it take to print the book using only Machine P?

Ans: (a) _____ [3]

(b) _____ [1]

12. Talik was given some pocket money for recess. He realised that if he had spent \$0.80 on each meal, he would have 8 meals fewer than if he had spent \$0.60 per meal. Talik spent \$0.60 on 8 meals and spent \$0.80 on the remaining meals. How many meals did the money last him?

Ans: _____ [4]

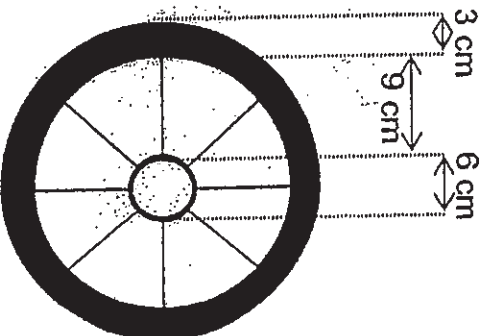


13. In every minute, three times as much water flows out of Tap A as Tap B into two empty containers, X and Y.
After 20 minutes, Container X is $\frac{2}{5}$ filled with water and the height of water level in Container X is the same as that of Container Y as shown in the diagram above.

- (a) What is the length of the base of Container X?
(b) How many litres of water can Container X hold?

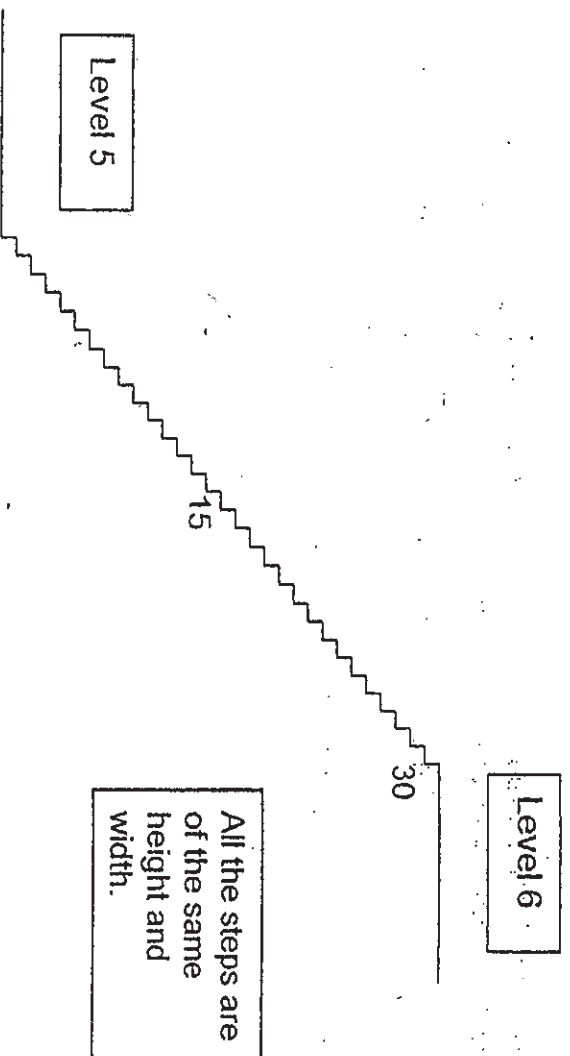
Ans: (a) _____ [2]

(b) _____ [2]



14. The diagram above, not drawn to scale, shows the dimensions of the wheel of Ken's bicycle.
He pushed his bicycle down a slope 3 m long.
How many complete revolutions did the wheel make?
(Take $\pi = 3.14$)

Ans: _____ [4]



15. There are 30 steps between Levels 5 and 6.
A toy robot takes $13\frac{1}{3}$ seconds to move up 20 steps if it moves up the first 10 steps at its highest speed and the next 10 steps in its lowest speed.
It will take 14 seconds to reach Level 6 from Level 5 if it moves up the first 24 steps at its highest speed and the next 6 steps at its lowest speed.
Find the shortest time it will take to reach Level 6 from Level 5.

Ans: _____ [4]

16. Tom and Jerry shared a box of marbles. If Tom was given 10 fewer marbles, Jerry would have five times as many marbles as Jerry^{TOM}. If Tom was given 10 more marbles, he would have $\frac{1}{2}$ as many marbles as Jerry.
What percentage of the marbles did Tom receive?

Ans: _____ [5]

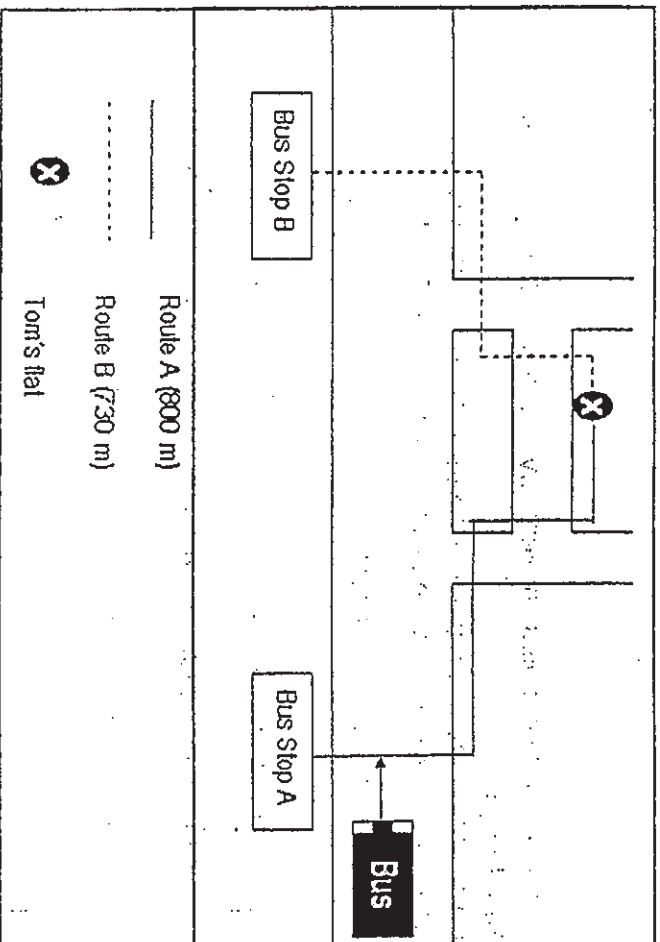
17. A group of 328 P5 children were divided into two teams at the P5 camp this year.
There were 8 more children in Team B than in Team A.
There were also 50% more boys in Team B than in Team A.
If $\frac{3}{8}$ of the girls were in Team B,

- (a) what percentage of the pupils in Team B are girls?
(b) what percentage of the children are boys?

Leave your answers as mixed numbers in the simplest form.

Ans: (a) _____ [3]

(b) _____ [2]



18. Tom is travelling on a bus that is moving at a uniform speed of 30 km/h. If he alights at Bus Stop A, he will walk home by Route A which is 800m away from his flat. He can also alight 1 km down the road at Bus Stop B and take the 730 m Route B home.
- If Tom walks at a uniform speed of 40 m/min, find:
- (a) the difference in time when he alights at the two different bus stops.
 - (b) the earliest time he can reach home if he boards the bus from the interchange 20 km away at 13 05.

Ans: (a) _____ [3]

(b) _____ [2]



Remember to check your work
Every mark counts.
--End of Paper --

ANSWER SHEET

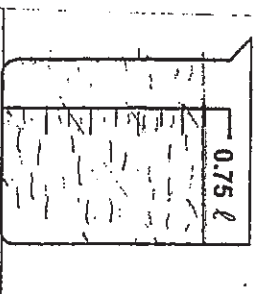
EXAM PAPER 2010

SCHOOL : MAHA BODHI PRIMARY
SUBJECT : PRIMARY 6 MATHEMATICS

TERM : PERLIMINARY

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

- 16)986 17)0.15 18)0.00625 19)30 coins 20)61/3cm
21)4 jugs 22)135° 23)prism 24)(3x +54) 25)\$18
26)7/22 27) 28)30cm² 29)125° 30)37½%



Paper 2

- 1)70.5kg 2)1.05L 3)130° 4)(12p + 10) pieces 5)6:7
6)\$12 7)158cm² 8)a)5cm b)30cm 9)a)week 4 b)3900000
10)35.3% 11)a)2 hour before b)12½h 12)26 meals
13)a)30cm b)56.25 14)No.of complete revolutions made ≈ 3
15)10 seconds 16)25% of the marbles 17)a)284/7% b)6040/41%
18)a)40 min b)1405

