Name : _____ (

Class : Primary 6 _____

CHIJ ST NICHOLAS GIRLS' SCHOOL (PRIMARY)

Primary 6 Mathematics

2011 Preliminary Examination

Paper 1

Booklet A

23 August 2011

15 QUESTIONS
20 MARKS

TOTAL TIME FOR BOOKLETS A AND B: 50 MINUTES

INSTRUCTIONS TO CANDIDATES
Do not turn over this page until you are told to do so.
Follow all instructions carefully.
Answer all questions.
The use of calculators is NOT allowed.

This booklet consists of 7 printed pages including the cover page.

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 correct oval (1, 2, 3, or 4) on the Optical Answer Sheet.

(20 marks)

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1. The sum of 2 numbers is 105. If the bigger number is $1\frac{1}{2}$ times the smaller number, find the smaller number.

1) 21
2) 42
3) 63
4) 126

2. Which one of the following numbers is a factor of 225?

1) 6
2) 8
3) 7
4) 9

3. $0.16 = \frac{A}{25}$. What number does the letter *A* represent?

1) 32
2) 16
3) 8
4) 4

4. Which one of the letters below is not symmetric?

1) A
2) C
3) E
4) Z

5. A square of side 12 cm is divided into 4 equal parts. What is the area of each part?

1) 3 cm^2
2) 9 cm^2
3) 36 cm^2
4) 48 cm^2

6. A container, completely filled with water, weighs 10.5 kg. When it is $\frac{1}{2}$ full, it weighs 5.375 kg. What is the mass of the container when it is empty?

1) 0.25 kg
2) 0.5 kg
3) 2.5 kg
4) 2.56 kg

7. Alina is p years old. Betty is 4 times as old as Alina. Mohana is 12 years younger than Betty. Express Mohana's age in terms of p.

1) $(4p + 12)$ years old
2) $(5p + 12)$ years old
3) $(4p - 12)$ years old
4) $(9p - 12)$ years old

8. An elevator can travel from level 1 to level 25 in 40 seconds. If the distance between 1 level and the next is 3 m, find the speed of the elevator.

1) $1\frac{3}{5}$ m/s
2) $1\frac{4}{5}$ m/s
3) $1\frac{7}{8}$ m/s
4) $3\frac{3}{4}$ m/s

9. What is the greatest number of 3-cm cubes that can be cut out from a rectangular block of wood measuring 12 cm by 10 cm by 8 cm?

1) 288
2) 96
3) 32
4) 24

10. Given that $\frac{2}{3}$ of Xavier's money is equal to 75% of Ian's money, what fraction of Ian's money is the total sum of money?

1) $\frac{8}{17}$

2) $\frac{9}{17}$

3) $\frac{17}{8}$

4) $\frac{17}{9}$

11. Hasnah paid \$24 to enter a theme park. She took some rides which cost \$1.20 and \$0.50 each. Altogether she spent \$40 at the theme park. How many rides did she take?

1) 8

2) 10

3) 18

4) 20

12. A cube has a volume of 64 cm^3. When the length of every edge of the cube is doubled, what will be the new volume of the cube?

1) 192 cm^3

2) 256 cm^3

3) 512cm^3

4) 4096 cm^3

13. The table shows the number of revolutions made by 4 wheels. Which wheel made the greatest number of revolutions?

Wheel	Number of revolutions	Time Taken
M	1050	1 minute
N	161	$\frac{2}{5}$ minute
O	113	6 seconds
P	405	18 seconds

1) Wheel M

2) Wheel N

3) Wheel O

4) Wheel P

14. Ivan took $\frac{1}{3}$ h to travel 28km from City X to City Y. He then increased his speed by 6 km/h and drove from City Y to City Z in $\frac{1}{2}$ h. What is the distance between City Y and City Z?

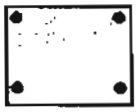
1) 34 km

2) 45 km

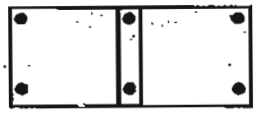
3) 60 km

4) 180 km

15. To pin a notice on a board, Shyanne needs 4 thumbtacks, one in each corner. To pin 2 notices, she needs 6 thumbtacks. If she pins notices up in this manner, what is the number of thumbtacks needed to pin 17 notices?



1 notice



2 notices

1) 21

2) 34

3) 36

4) 68

----------End of Paper –

Name : _____ ( )

Class : Primary 6 _____

CHIJ ST NICHOLAS GIRLS' SCHOOL(PRIMARY)

Primary 6 Mathematics

2011 Preliminary Examination

Paper 1

Booklet B

23 August 2011

Booklet A	20
Booklet B	20
Total (Paper1)	40

15 QUESTIONS
20 MARKS

TOTAL TIME FOR BOOKLETS A AND B: 50 MINUTES

INSTRUCTIONS TO CANDIDATES
Do not turn over this page until you are told to do so.
Follow all instructions carefully.
Answer all questions.
The use of calculators is NOT allowed.

This booklet consists of 7 printed pages including the cover page.

Questions 16 to 25 carry 1 mark each. Show your working clearly in the space provided for each question and write your answers in the spaces provided. For questions which require units, give your answers in the units stated. (10 marks)

Do writ this spa

16. A piece of raffia measuring 7m long was cut into smaller pieces. Each piece was $\frac{5}{8}$ m long. What is the length of the remaining raffia?

Ans : _____ m

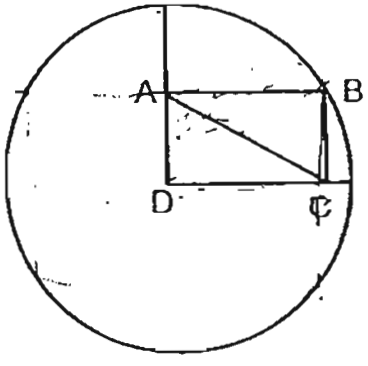
17. Find the ratio of 40 m to 8 cm.

Ans : _____

18. Express 26.9% as a decimal.

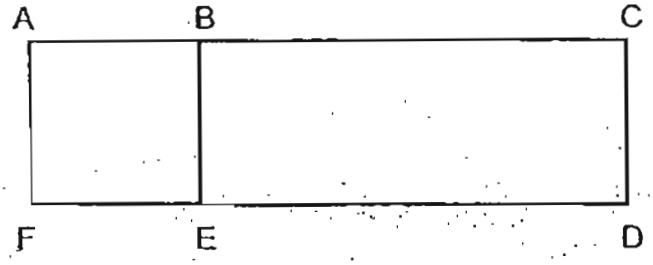
Ans: _____

19. The figure shows a circle of radius 57cm and a rectangle ABCD. Find the length AC.



Ans : _____ cm

20. The area of square ABEF and rectangle ACDF are 64 cm^2 and 144 cm^2 respectively. What is the length of BC?



Ans : _____ cm

21. A car can travel 164 km on 18 litres of petrol. What distance can it travel on 54 litres of petrol?

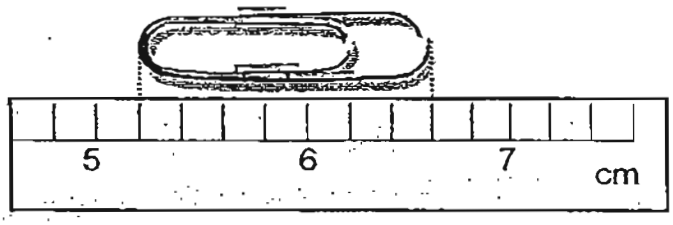
Ans : _____ km

22. A compass was pointing North when Isis faced Tammy. After turning 135° clockwise, Isis was facing the road. How many degrees clockwise must Isis turn to face Tammy again?

Ans : _____ °

Do not write in this space

23. What is the length of the paper clip?



Ans : _____cm

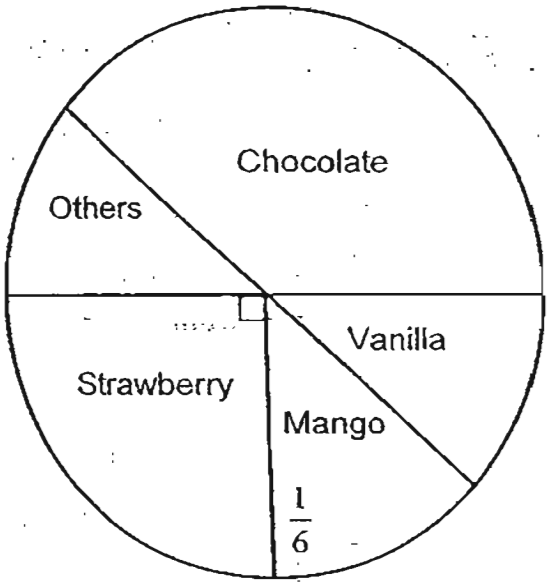
24. Subtract 4 hundredths from the sum of 1.23 and 567.8. The answer is _____.

Ans : _____

25. The pie chart below shows the choices made by a group of children on their favourite ice-cream flavour.

If 54 children like strawberry ice-cream, how many children like vanilla ice-cream?

Do not write in this space



Ans : _____

Questions 26 to 30 carry 2 marks each. Show your working clearly in the space provided for each question and write your answers in the spaces provided. For questions which require units, give your answers in the units stated. (10 marks)

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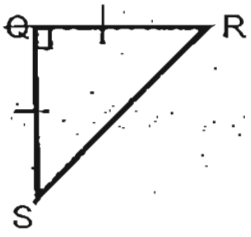
26. 

If RS = 20 cm, find the area of the triangle.

Ans : _____ cm^2

27. The mass of Box X is r kg. Box Y is 7 kg heavier than Box X but 4 kg lighter than Box Z. Find the total mass of the three boxes in terms of r.

Ans : _____ kg

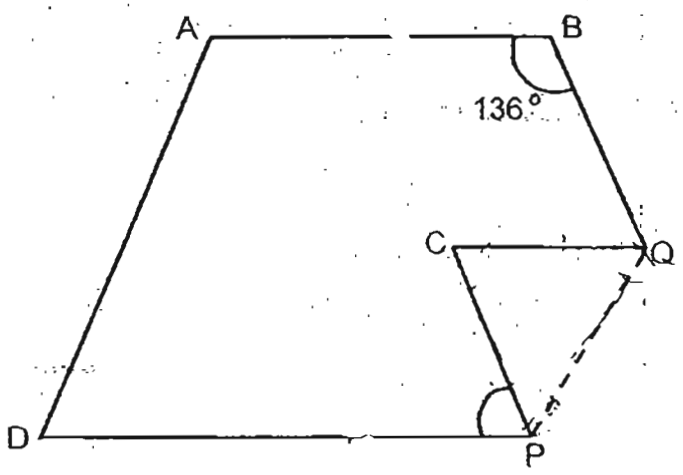
28. The average age of 3 men is 21 years old. If they are ~~of different ages and~~ are at least 17 years old, what is the maximum possible age of the oldest person in the group?

Ans : _____

29. The figure below is not drawn to scale.

ABCD is a trapezium. It is folded along the dotted line as shown.

Find ∠CPD.



Ans: _____ °

30. 12 children were lined up in a row. They were spaced out equally and the distance between the third child and the seventh child was 108 cm. What was the distance between the first child and the last child?

Ans : _____ m

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----------End of Paper ----------

Name : _____ ( )

Class : Primary 6 _____

CHIJ ST NICHOLAS GIRLS' SCHOOL (PRIMARY)

Primary 6 Mathematics

Preliminary Examination

Paper 2

23 August 2011

Paper 1	40
Paper 2	60
Total	100

_____

Parent's / Guardian's Signature

TIME : 1 HOUR 50 MINUTES

INSTRUCTIONS TO CANIDATES

Do not turn over this page until you are told to do so
Follow all instructions carefully.
Answer all questions.
The use of an approved calculator is expected, where appropriate.

This booklet consists of 13 printed pages including the cover page.

Questions 1 to 5 carry 2 marks each. Show your working clearly and write your answers in the spaces provided. For questions which require units, give your answers in the units stated. (10 marks)

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1. 4 identical containers can hold $\frac{7}{8}$ kg of flour. How many kilograms of flour can 15 such containers hold? Leave your answer as a fraction.

Ans : _____ kg

2. Siti bought some cloth to make some bags. If she had made 45 bags, she would have 21m of cloth left. If she had made 63 bags, she would have needed another 33m of cloth. How much cloth did she buy?

Ans : _____ m

3. Sheela was 25min late for a movie. She was at the cinema at 8.15p.m. If the duration of the movie was 137min, at what time did the movie end? Leave your answer in the 24-hour clock.

Ans : _____

4. Tree A and Tree B have an average height of 608 cm.
Tree A and Tree C have an average height of 513 cm.
Tree B and Tree C have an average height of 589 cm.
What is the total height of the three trees?

Do not write in this space

Ans : _____ cm

5. At 6 a.m., a car left Town A for Town B at a speed of 65 km/h. At the same time, another car left Town B for Town A at a speed of 55 km/h. The distance between the two towns was 720 km. At what time did the 2 vehicles pass each other?

Ans : _____ p.m.

For questions 6 to 18, show your working clearly in the space below each question and write your answer in the spaces provided. The number of marks available is shown in the brackets ( ) at the end of each question or part-question. (50 marks)

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6. The table below shows the monthly charges for Mr Wong's electricity usage.

Fixed monthly charge	\$18.20
First 100 units	\$0.35 per unit
Subsequent 5 units or part thereof	\$0.15

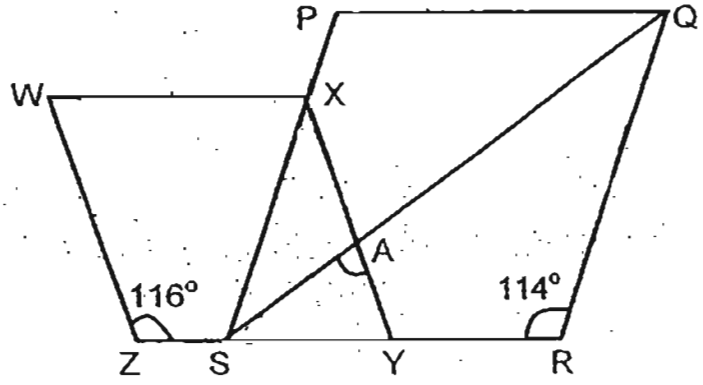
How much will he be charged if his family uses 693.4 units?

Ans _____ (3m)

7. Winifred can clean $\frac{1}{6}$ of a room in 2 hours. Louisa can clean $\frac{1}{3}$ of the same room in $\frac{1}{2}$ an hour. If the 2 girls work together, how long will they take to clean the room?

Ans : _____ (3m)

8. In the diagram, WXYZ and PQRS are rhombuses. Find ∠SAY.



Ans:_____ (3m)

9. 20 pails of water can fill $\frac{5}{8}$ of a tank. Another 8 pails and 10 jugs of water are needed to fill the tank to its brim. What is the maximum number of jugs of water the tank can hold?

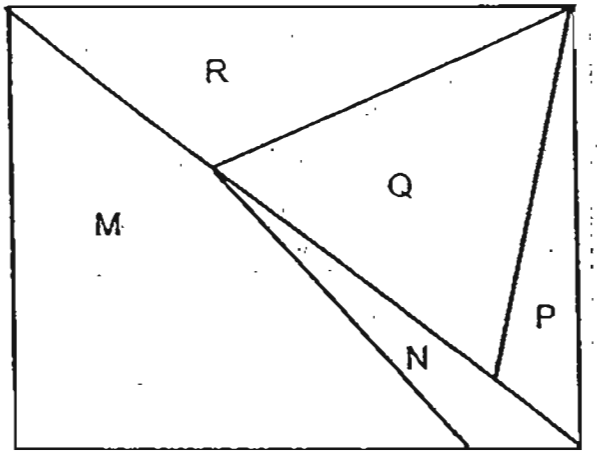
Ans : _____(3m)

10. The average mass of some children was 48 kg. The mass of 1 child was recorded wrongly as 46 kg. His correct mass should be 64 kg. As a result, the correct average mass of the children was 50 kg. How many children were there?

Do not write in this space

Ans : _____(3m)

11. The ratio of the area of M to the area of R is 2 : 1. The ratio of the area of R to the area of P is 5 : 2. If P is $\frac{1}{3}$ of Q, find the ratio of the area of M to the area of N to the total area of the rectangle.



Ans : _____(3m)

12. At 8.30 a.m., Myke and Jerome set off at the same time from Town X to Town Y. At 11.00 a.m., Myke completed his journey but Jerome had covered only $\frac{5}{8}$ of the journey. Jerome's speed was 54km/h slower than Myke's.

Do not write in this space

a) Find the distance between Town X and Town Y.

b) At what time would Jerome complete his journey?

Ans : a) _____ (2m)

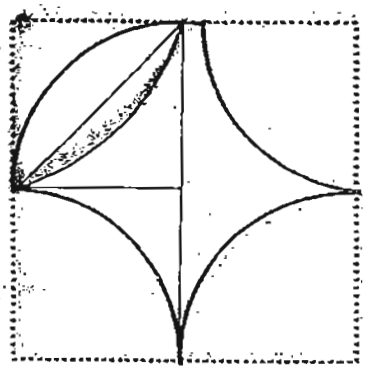
b) _____ (2m)

13. At a furniture shop, Mr Chong spent all his money on 14 study desks and 12 chairs. If he had bought 16 study desks and 7 chairs, he would have saved $231. Each chair costs $105 less than each study desk. How much money did he spend at the furniture shop?

Do not write in thi space

Ans: _____ (4m)

14. The figure is made up of 4 quadrants of radius 20cm. Find the area of the figure. (Take $\pi = 3.14$)



Ans : _____ (4m)

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15. Donavan, Ethan, Freddy and Gilbert shared some trading cards. Donavan received 20% of all the trading cards. Ethan received 48 fewer trading cards than Donavan. Freddy received twice as many trading cards as Ethan and Gilbert received the remaining 432 trading cards.

a) Find the total number of trading cards shared by the 4 boys.

b) If Donavan was given additional trading cards, he would have a total of 487 trading cards. Find the percentage increase in the number of trading cards Donavan has.

Ans : a)_____ (3m)

b)_____ (2m)

16. Mr Ho bought a total of 1260 curry puffs and sardine puffs. The number of curry puffs was 75% of the number of sardine puffs. When some sardine puffs were sold, the number of sardine puffs formed 28% of the total number of puffs left.

Do not write in this space

a) How many curry puffs did Mr Ho buy?

b) How many sardine puffs were sold?

Ans : a) _____ (2m)

b) _____ (3m)

17. A shopkeeper had some markers in red and blue. If 50 red markers and 25 blue markers were sold each week, there would be 500 red markers left when all the blue markers were sold. If 25 red markers and 50 blue markers were sold each week, there would be 800 red markers left when all the blue markers were sold. How many markers did the shopkeeper have at first?

Do not write in this spa

Ans : _____ (5m)

18 A rectangular tank measuring 40 cm by 30 cm by 40 cm was $\frac{1}{6}$ filled with water. At 0930 h, Tap X with water flowing out at a rate of 3 ℓ per minute was turned on. At 0932 h, Tap Y was turned on to drained water out of the tank at a fixed rate. At 0943 h, the tank was 75% filled with water. At what time would the tank be filled to the brim?

Do not write in this space

Ans : _____ (5m)

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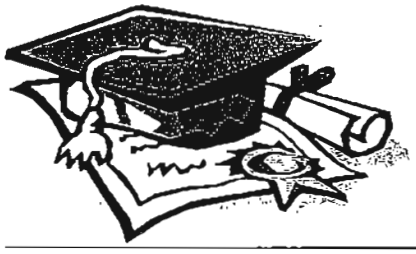
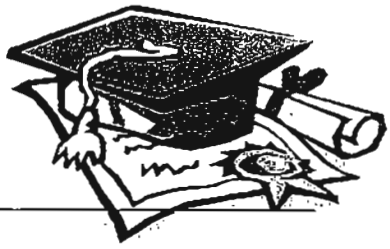


ANSWER SHEET

EXAM PAPER 2011



SCHOOL : CHIJ
SUBJECT : PRIMARY 6 MATHEMATICS

TERM : PRELIMINARY

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

16)1/8 m **17)500:1** **18)0.269** **19)57cm** **20)10cm**

21)492km **22)225°** **23)1.4 cm** **24)568.99** **25)18**

26)100cm^2 **27)(3r+18)kg** **28)28** **29)44°** **30)2.97m**

Paper 2

1)7/8 ÷4 = 7/32
7/32 x 15 = 3$^{9}/_{32}$

2)45→extra 21m
63→need 33m
63 – 45 = 18
18→3 + 21 = 54
1→54 ÷18 = 3
45→3 x 45 = 135
135 + 21 = 156

3)2107

4)1710cm

5)12p.m.

6)693.4 – 100 = 593.4
593.4 ≈ 595
595 ÷5 = 119
0.35 x 100 = 35
35 + 18.2 = 53.2
119 x 0.15 = 17.85
17.85 + 53.2 = $71.05

7)W→1/12 1h
L→ 2/3 1h
= 8/12 1h
8/12 + 1/12 = 9/12 (1h)
1 – 9/12 = 3/12
3/12 ÷9/12 = 1/3 (20min)
1/3 x 60 = 20
20 + 60 = 80min

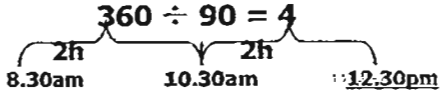
8)(180 – 116) ÷ 2 = 32
32 x 2 = 64
(180 – 114) ÷ 2 = 33
180 – 33 – 64 = 83

9)5/8 ÷20 = 1/32
1/32 x 8 = ¼
1 – 5/8 = 3/8
3/8 – ¼ = 1/8
1/8 of tank→10 jugs
8/8 of tank→10 x 8 = 80jugs

10)50 – 48 = 2
64 – 46 = 18
18 ÷ 2 = 9

11)10:3:26

12)a)54 x 2½ = 135
3u→135
1u→135 ÷3 = 45
8u→45 x 8 = 360km
b)360 ÷2½ = 144
144 – 54 = 90
360 ÷ 90 = 4



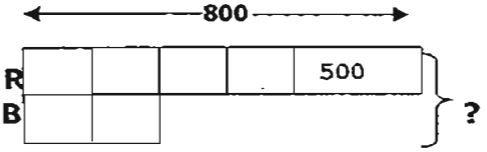
13)1D→1C + $105
2D→2C + $210
(14D + 12C) – (16D + 7C) = $231
5C – 2D = 231
2D = 5C – 231
5C – 231 = 2C + 210
3C = 210 + 231
1C = 441/3 = 147
1D = 147 + 105
1D = 252
(14 x 252) + (12 x 14)
= 3528 + 1704 = $5292

14)20 x 2 = 40
40 x 40 = 1600 (cm^2)
¼ x 3.14 x 20 x 20 = 314
20 x 20 = 400
400 ÷2 = 200
314 – 200 = 114 (½ leaf)
114 x 2 = 228
314 x 4 = 1256
1600 – 1256 = 344
344 + 228 = 572cm^2

15)a)432 – (48 x 3) = 288
2u→288
10u→288 x 5 = 1440
b)487 – 288 = 199
199/288 x 100 = $69_{7/72}$%

16)a)1260 ÷175 = 7.2
7.2 x 75 = 540
b)540 ÷72 = 7.5
7.5 x 100 = 750
1260 – 750 = 510

17)



3u→800 – 500 = 300
1u→300 ÷ 3 = 100
6u→6 x 100 = 600
600 + 500 = 1100

18)V = 40 x 30 x 40 x 1/6 = 8000cm^3 = 8L
2min = 3 x 2 = 6L
8 + 6 = 14L
40 x 30 x 40 x 75/100 = 36000cm^3 = 36L
0943 – 0932 = 11min
36 – 14 = 22L
40 x 30 x 40 x 25/100 = 12000cm^3 = 12L
22L→11min
12L→11/22 x 12 = 6min
0943h + 6min = 0949h