

Tao Nan School
Primary 6 Mathematics Mid-Year Examination 2006

Name: _____ () Date: 11 May 2006

Class: Primary 6 () Time: 8.00 a.m. – 10.15 a.m.

Parent's Signature: _____ Marks: _____ / 100

Section A (20 marks)

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

1. The height of the teacher's table is about _____.

- (1) 8.5 cm
- (2) 8.5 m
- (3) 85 cm
- (4) 85 m

2. The population of a town is 383 705. Round off this number to the nearest thousand.

- (1) 383 000
- (2) 383 700
- (3) 384 000
- (4) 384 700

3. Express 4% as a fraction.

- (1) $\frac{1}{125}$
- (2) $\frac{1}{25}$
- (3) $\frac{1}{4}$
- (4) $\frac{2}{5}$

4. $2\frac{2}{5}$ h = _____ min.

- (1) 132
- (2) 144
- (3) 224
- (4) 240

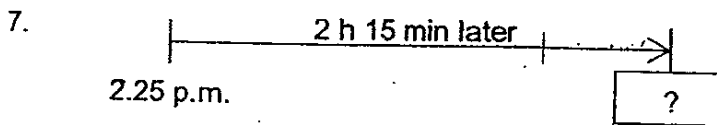
5. There are guppies and swordtails in a tank. $\frac{6}{13}$ of the total number of fish are guppies. What is the ratio of the number of swordtails to the number of guppies?

- (1) 6 : 13
- (2) 7 : 13
- (3) 6 : 7
- (4) 7 : 6

6. $\frac{96}{101} = \frac{1}{101} + \frac{2}{101} + \frac{3}{101} + \boxed{?} \times \frac{30}{101}$

What is the missing number?

- (1) $\frac{3}{101}$
- (2) $\frac{4}{101}$
- (3) 3
- (4) 4



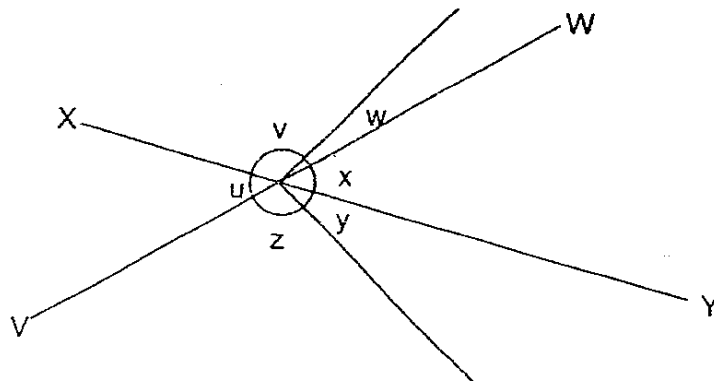
The time is _____.

- (1) 04 40
- (2) 06 40
- (3) 14 40
- (4) 16 40

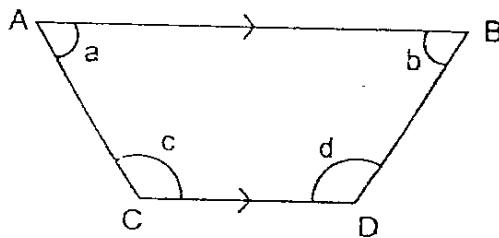
8. A soccer ball costs \$40. A basketball costs 80% as much as the soccer ball. How much does a basketball cost?

- (1) \$9
- (2) \$10
- (3) \$30
- (4) \$32

9. The diagram below is not drawn to scale. VW and XY are straight lines. Which of the following is true?

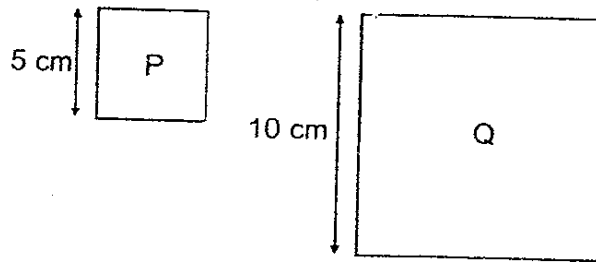


- (1) $\angle u = \angle y$
 - (2) $\angle z = \angle v$
 - (3) $\angle y + \angle z = \angle v + \angle w$
 - (4) $\angle u + \angle v = \angle w + \angle z$
10. Which of the following is true about the diagram?



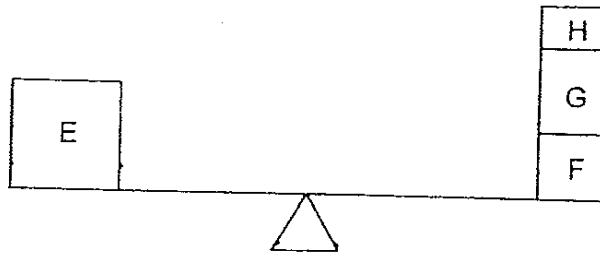
- (1) $\angle a + \angle c = 180^\circ$
- (2) $\angle c + \angle d = 180^\circ$
- (3) $AB \parallel BD$
- (4) $AC \parallel BD$

11. P and Q are squares. How many times the area of P is the area of Q?



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

- 12.



E, F, G and H are boxes.
Box E weighs 8 kg. What is the average mass of the 4 boxes?

- (1) 16 kg
(2) 2 kg
(3) 8 kg
(4) 4 kg

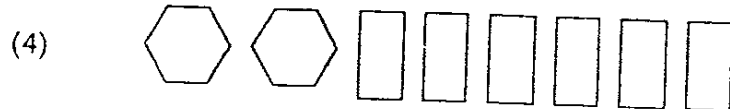
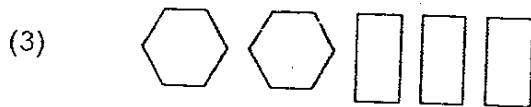
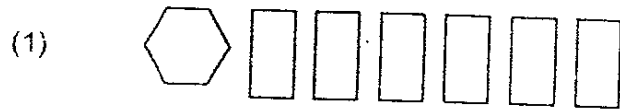
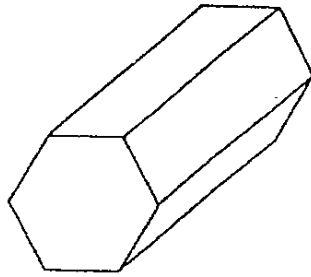
13. The following table shows the travel time in minutes for 5 train stations along the North East Line.

Station	Outram Park	Clarke Quay	Dhoby Ghaut	Little India	Boon Keng
Outram Park					
Clarke Quay	3				
Dhoby Ghaut	5	2			
Little India	7	4	1		
Boon Keng	11	8	5	3	

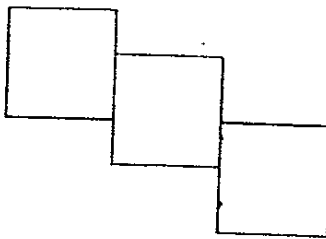
At 17 38, Devi boarded a train at Little India. What time would she reach Boon Keng?

- (1) 5.49 a.m.
- (2) 7.41 a.m.
- (3) 5.41 p.m.
- (4) 7.49 p.m.

14. Which set of shapes makes up the prism shown below?



15. The figure below is made up of 3 identical 5-cm squares. What is the perimeter of it?



- (1) 30 cm
- (2) 40 cm
- (3) 50 cm
- (4) 60 cm

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Section B (30 marks)

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)

16. Write 1 315 000 in words.

Ans: _____

17. Write down the lowest common multiple of 6 and 10.

Ans: _____

18. Simplify $13a + 5 - 19a + 14$.

Ans: _____

19. Express $6\frac{17}{1000}$ as a decimal.

Ans: _____

20. Sheryl was born on 1 February 1997. How old will she be on 1 February 2006?

Ans: _____ years

21. Find the value of $\frac{8}{9} \div 3$.

Ans: _____

22. What is 40% of 90?

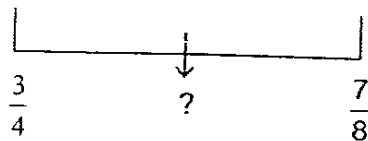
Ans: _____

23. The table shows the time taken by 6 runners in a race. Who came in first in the race?

Runner	Time in seconds
Adrian	12.7
Bala	13.2
Carl	13.1
Dan	12.2
Ernest	12.5
Fandi	13.4

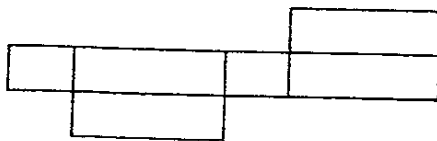
Ans: _____

24. Write down the fraction exactly halfway between $\frac{3}{4}$ and $\frac{7}{8}$ in its simplest form.



Ans: _____

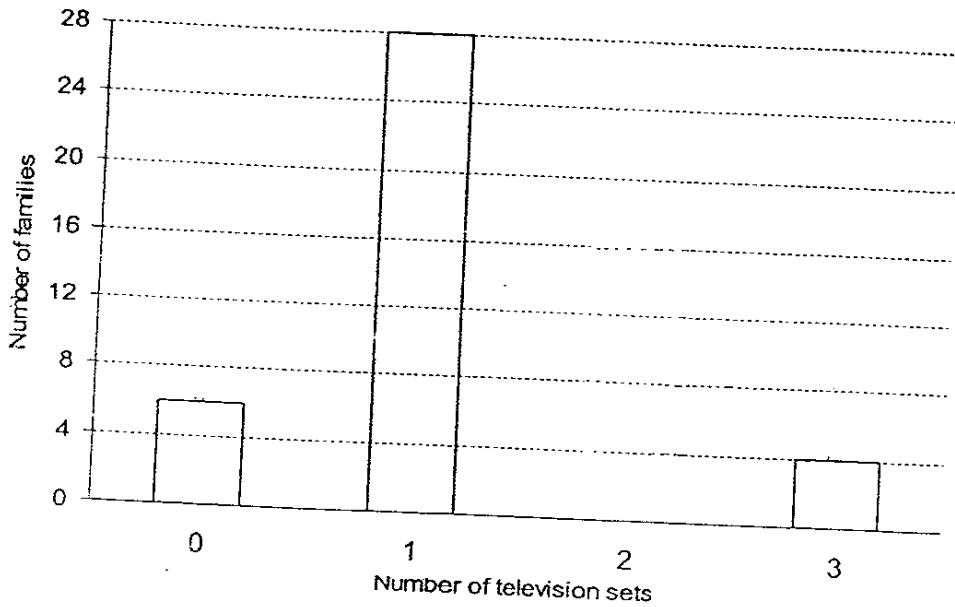
25. Name the solid formed by the net shown below.



Ans: _____

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)

The graph shows the number of television sets owned by 54 families. Study it and answer questions 26 to 28.



26. Draw a bar to represent the number of families with 2 television sets.
27. What is the total number of television sets owned by the total number of families?

Ans: _____

28. What fraction of the total number of families do not have television sets?

Ans: _____

29. Study the number pattern and write down the missing number.

		81	?	122		
42	52	65		147	175	206

Ans: _____

30. The ratio of the number of stamps Clara had to the number of stamps Jason had was 1 : 3. When Clara received 15 stamps from Jason, both had the same number of stamps. How many stamps did Clara have at first?

Ans: _____

31. What number does the box represent?

$$11 \times 999 = 10\,989$$

$$22 \times 999 = 21\,978$$

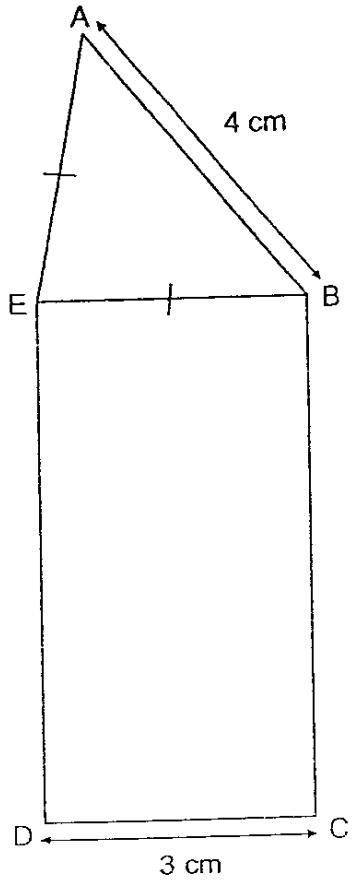
$$33 \times 999 = 32\,967$$

⋮

$$\square \times 999 = 98\,901$$

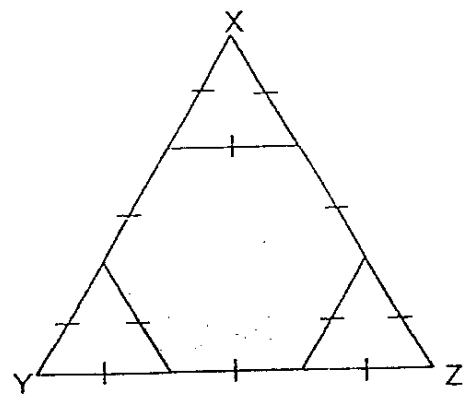
Ans: _____

32. The figure below is made up of an isosceles triangle and a rectangle. The length of BC is twice the length of AB. Find the perimeter of the figure.



Ans: _____ cm

33. XYZ is an equilateral triangle. What fraction of it is shaded?

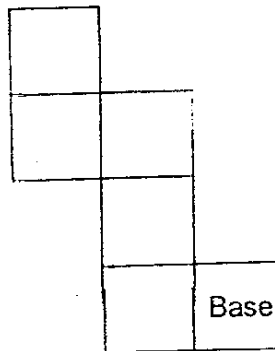


Ans: _____

34. A bicycle and a skateboard cost \$272. The cost of the skateboard is 36% of the cost of the bicycle. How much does the bicycle cost?

Ans: \$ _____

35. Shade the top of the cube in the net below



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Section C (50 marks)

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 the brackets () at the end of each question or part question.

36. A bedsheet and a pillow cost \$38. If the pillow costs \$9 less than the bedsheet, find the cost of the bedsheet.

Ans: _____ (3 m)

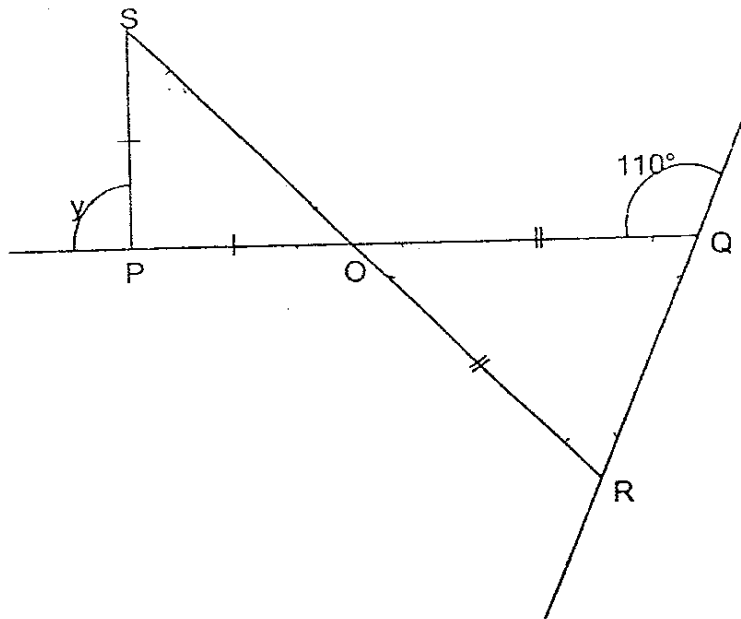
37. Jane has twice as many 10¢ coins as 20¢ coins. How much money does Jane have if she has 27 coins?

Ans: _____ (3 m)

38. For every 2 jugs of orange syrup, Ling mixed 7 jugs of water with them to obtain a container of drink for a party.
Find the number of containers of drink Ling would get if she used 6 jugs of orange syrup.

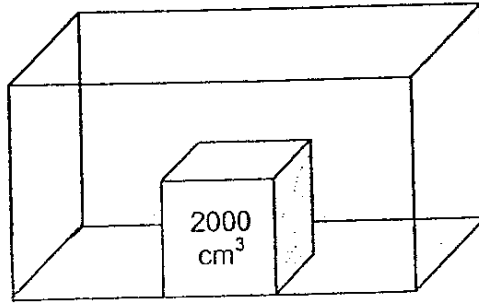
Ans: _____ (3 m)

39. The diagram below is not drawn to scale. PQ and SR are straight lines.
Find $\angle y$.



Ans: _____ (3 m)

40. The volume of a tank is 6900 cm^3 . It contains a metal cube which has a volume of 2000 cm^3 . The tank is then filled with water at a rate of 700 ml every 5 minutes. How many minutes will it take to fill the tank?



Ans: _____ (3m)

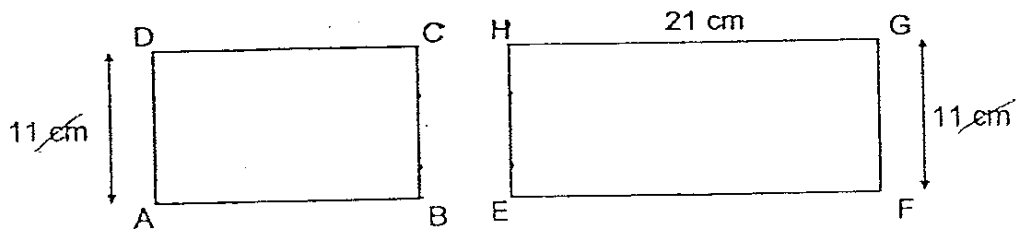
41. Mrs Ramad is $15m$ years old. She is now 3 times as old as her son. How old will she be when her son is 30 years old? Express your answer in terms of m .

Ans: _____ (3m)

42. Rāhī gave Sandy 12% of her beads and had 440 beads left. This increased the number of beads which Sandy had by 5%. How many beads does Sandy have now?

Ans: _____ (4 m)

43. The sum of the area of rectangle ABCD and EFGH is 407 cm^2 . Find the difference in their perimeter.



Ans: _____ (4 m)

44. At a childcare centre, the ratio of the number of teachers to the number of children is $3 : 20$. The number of boys is $\frac{1}{4}$ of the number of girls. On a particular day, 8 girls were absent. The ratio of the number of boys to the number of girls became $1 : 3$. How many teachers were there?

Ans: _____ (4 m)

45. Mr Sim gave some money to his three children, Amy, Bella and Chris. Bella and Chris received $\frac{1}{3}$ and $\frac{1}{8}$ of the money respectively. The remaining amount of money was given to Amy. If Amy received \$65 more than Bella, how much money must Bella give to Chris so that he would have \$85?

Ans: _____ (5 m)

46. A bus company charges \$50 for every trip made on time and 10% less for a late trip. Last November, the bus company collected \$12 610. For every 20 trips made, 6 were late trips. How many trips were made on time?

Ans: _____ (5 m)

47. Saleh drove from Town A to Town C. After driving for 45 minutes at an average speed of 84 km/h, he reached Town B and had covered $\frac{1}{3}$ of his journey. Then, Saleh took a $\frac{1}{2}$ hour lunch break. He continued with the journey at an average speed of 90 km/h.

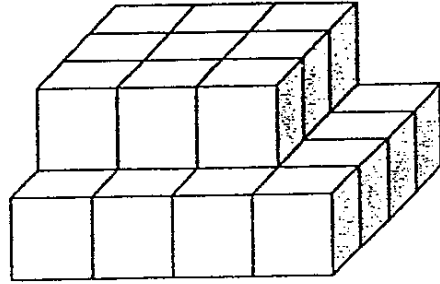
Saleh reached Town C at 14 40.

- (a) How far apart were Town B and Town C?
(b) What time did Saleh leave Town A?

Ans: (a) _____ (2 m)

(b) _____ (3 m)

48. The figure below shows a solid which is made up of 2-cm cubes.



- (a) Find the volume of the solid.
(b) Find the total surface area of the solid.

Ans: (a) _____ (2 m)

(b) _____ (3 m)

End of Paper

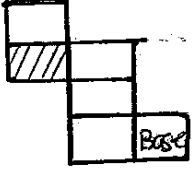
Tao Nan Primary School
Primary 6 Maths SA1 Exams (2006)

Answer Sheets

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

- | | |
|---|--|
| <p>16. One million, three hundred and fifteen thousand.</p> <p>17. 30</p> <p>18. $(19 - 6a)$</p> <p>19. 6.017</p> <p>20. 9 years</p> | <p>21. $\frac{8}{27}$</p> <p>22. 36</p> <p>23. Dan</p> <p>24. $\frac{13}{16}$</p> <p>25. cuboids</p> |
|---|--|

26.	$\frac{16}{2}$	27.	72
28.	$\frac{1}{9}$	29.	100
30.	15	31.	99
32.	26cm	33.	$\frac{2}{3}$

34.	\$200.00	35.	
36.	<p>2 Bedsheets = $38 + 9 = 47$ 1 Bedsheet = $47 \div 2 = 23.5$ It costs <u>\$23.50</u> (Ans)</p>	37.	$\begin{array}{rcl} 0.10 & : & 0.20 & : & TL \\ 2 & : & 1 & : & 3 \\ 18 & : & 9 & : & 27 \end{array}$ <p>$0.10 = 18 \times 0.10 = \\$ 1.80$ $0.20 = 9 \times 0.20 = \\$ 1.80$ She has <u>\$3.60</u> (Ans)</p>
38.	<p>OS : W : D 2 : 7 : 1 6 : 21 : 3</p> <p>She would get <u>3 containers of drink</u> (Ans)</p>	39.	<p>$\angle a = 180^\circ - 110^\circ = 70^\circ$ $\angle b = 180^\circ - 70^\circ \times 2 = 140^\circ$ $\angle y = 40^\circ \times 2$ (interior \sphericalangle = exterior \sphericalangle) = 80° $\angle y$ is <u>80°</u> (Ans)</p>
40.	<p>Vol. of tank = $(6900 - 2000) = 4900\text{cm}^3$ Minutes = $\frac{4900}{700} \times 5 = 35$</p> <p>It will take <u>35 minutes</u> (Ans)</p> <p>(Check): $35 \div 5 = 7$ $7 \times 700 = 4900$ $4900 + 2000 = 6900\text{cm}^3$</p>	41.	<p>Son : $15\text{m} \div 3 = 5\text{m}$</p> $= \frac{30}{5\text{m}} = \frac{30}{5 \times \text{m}}$ $= \frac{6}{\text{m}}$ <p>Mrs Ramad = $15 \times \text{m} \times \frac{6}{\text{m}} = 90$ Different = $15\text{m} - 5\text{m} = 10\text{m}$ Now = $30 + 10\text{m}$ She will be <u>$(30 + 10\text{m})$ years old</u> (Ans)</p>
42.	<p>Rani = $(100 - 12)\% = 88\%$ = $\frac{440}{88} \times 12 = 60$ Sandy = 105% = $\frac{60}{505} = 1260$</p> <p>Sandy has <u>1260 beads</u> now. (Ans)</p>	43.	<p>Area (EFGH) = $21 \times 11 = 231$ Area (ABCD) = $407 - 231 = 176$ Length = $176 \div 11 = 16$</p> <p>Breadth is the same. Different = $21 \times 2 - 16 \times 2$ = $42 \times 32 = 10$ The different is <u>10cm</u> (Ans)</p>

48a.	<p>Volume of the solid = $18 + 7$ $= 25$ Length = $2 \times 2 \times 2 \times 25$ $= 200\text{cm}^3$</p>
48b.	<p>Total volume = $14 + 14 + 32$ $= 60$ Surface Area = $2 \times 2 \times 60$ $= 240$ It is <u>240cm^2</u> (Ans)</p>