TAO NAN SCHOOL
PRIMARY SIX MATHEMATICS CONTINUAL ASSESSMENT 1 – 2004

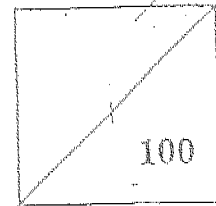NAME: _____ (   )   DATE: **4 MARCH 2004**

CLASS: PRIMARY 6 _____   DURATION: **2 H 15 MIN**

PARENT'S SIGNATURE: _____   MARKS:

100

Section A (25 marks)

Questions 1 to 5 carry 1 mark each. Questions 6 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.

1. Find the value of $24 + 36 \div 3 \times 6$.

    1) 26
    2) 96
    3) 3
    4) 120

2. $7a + 5 - 3a - 2 + a =$ _____

    1) $3a + 3$
    2) $3a + 7$
    3) $5a + 3$
    4) $5a + 7$

3. The ratio of 90 cm to 15 cm to 1 m is _____

    1) $6 : 1 : 1$
    2) $9 : 2 : 10$
    3) $18 : 3 : 1$
    4) $18 : 3 : 20$

4. Express 0.015 as a percentage.

    1) 150%
    2) 15%
    3) 1.5%
    4) 0.15%

1

5. Express 1 m as a percentage of 40 cm.
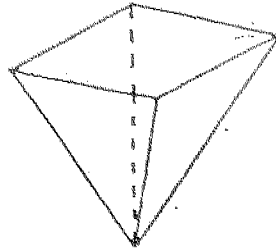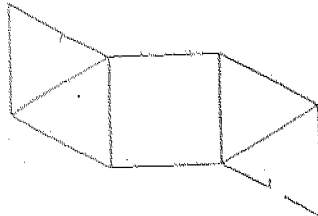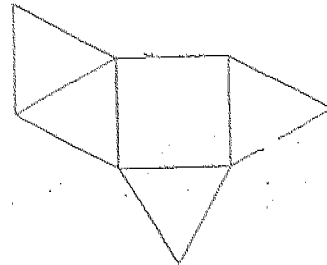
    1) 2.5%

    2) 40%

    3) 250%

    4) 400%

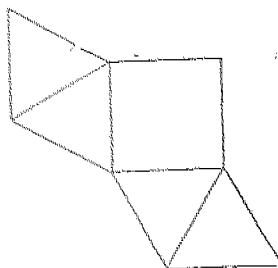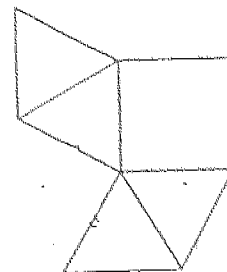6. Which one of the following is **not** a net of the given solid?

7. The ratio of the length of a rectangular box to its breadth to its height is 4 : 2 : 3. What is its volume if the length is 12 cm?

    1) 108 cm³
    2) 288 cm³
    3) 324 cm³
    4) 648 cm³

2

8. Mrs Lee bought 3 kg of flour. She used 600 g of it to bake some cookies. What percentage of the flour had she left?

    1) 99.5%
    2) 80%
    3) 20%
    4) 0.5%

9. A machine takes 1 hour to clean 60 plates. At this rate, how many plates can it clean in 10 minutes?

    1) 6
    2) 10
    3) 100
    4) 600

10. James took 4 days to read $\frac{3}{4}$ of a book. He took another 2 days to read the remaining t pages. Express the average number of pages James read per day in terms of t.

    1) t

    2) $\frac{t}{2}$

    3) $2t$

    4) $\frac{2t}{3}$

11. The diagram shows the net of a cube. Which face is directly opposite A when the net is folded to form the cube?
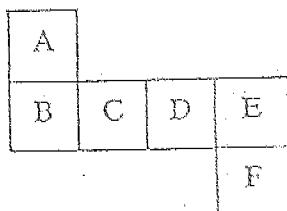
    1) C
    2) D
    3) E
    4) F

12. Michael's age is $\frac{3}{10}$ of his father's age. In 13 years' time, their total age will be 91 years. Find the ratio of Michael's age to his father's age in 13 years' time.

    1) 4 : 9
    2) 3 : 10
    3) 34 : 83
    4) 31 : 73

13. 49 pupils took part in a drawing competition. The ratio of the number of girls to the number of boys is 2 : 5. How many more boys than girls took part in the competition?

    1) 7
    2) 14
    3) 21
    4) 28

14. Glen has twice as many stickers as Rachel. Rachel has 4 times as many stickers as John. What is the ratio of the number of John's stickers to Rachel's stickers to Glen's stickers?

    1) 1 : 4 : 2
    2) 1 : 4 : 8
    3) 2 : 4 : 1
    4) 8 : 4 : 1

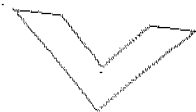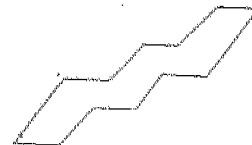15. Which of the following shapes below does not tessellate?
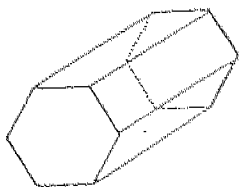
1)

2)

3)

4)

4

Section B (20 marks)

Questions 16 to 35 carry 1 mark each. Write your answers in the spaces provided. Give your answers in the units stated.

16.   Find the value of $9 - 2t^2 + 5$, if $t = 2$.

Ans: _____

17.   The solid below has _____ faces.

Ans: _____

18.   Express 32% as a fraction in its simplest form.

Ans: _____

19. $60 - 25 \times 2 = $ _____

Ans: _____

20. $8 : 3 : 12 = 56 : 21 : \boxed{}$
      The missing number in the box is _____

Ans: _____

5

21.

$\triangle \triangle \triangle$ 　$\bigcirc \bigcirc \bigcirc$ 　$\square \square$
$\triangle \triangle \triangle$ 　$\bigcirc \bigcirc \bigcirc$ 　$\square \square$

What is the ratio of the number of squares to the number of triangles to the total number of shapes?

Ans: _____ _____

22. The ratio of the number of apples to the number of oranges is 7:4. If there are $8p$ oranges, how many more apples are there? (Express your answer in terms of p)

Ans: _____

23. Ahmad had $50. If Ahmad gave Henry 50% of his money and saved 20% of the remainder, how much money did he save?

Ans: $_ _____

24. Mr Lee had $ v. He gave $20 to his son and divided the remaining amount equally between his two daughters. How much did each daughter receive?

Ans: $_____

25. The ratio of the number of green pens to the number of red pens to the number of blue pens is $16 : 5 : 15$. What fraction of the pens are blue? (Give your answer in the simplest form)

Ans: _____

6

26. In the diagram below, not drawn to scale, DEFH is a parallelogram. DGH is an isosceles triangle. Find ∠a.

Ans: _____ °
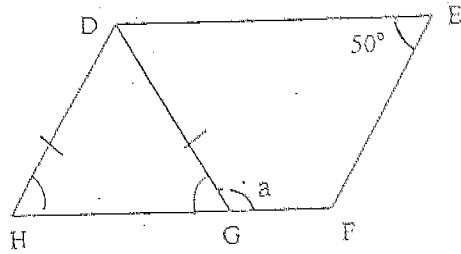
27. The breadth of a rectangular field is y cm. Its length is 3 times its breadth. Express the perimeter of the field in terms of y.

Ans: _____ cm

28. The table below shows the prices of buns at a shop.

Types of bun	Price per bun
Tuna	$1.20
Sausage	$1.50
Kaya	$0.85
Red bean	$0.90

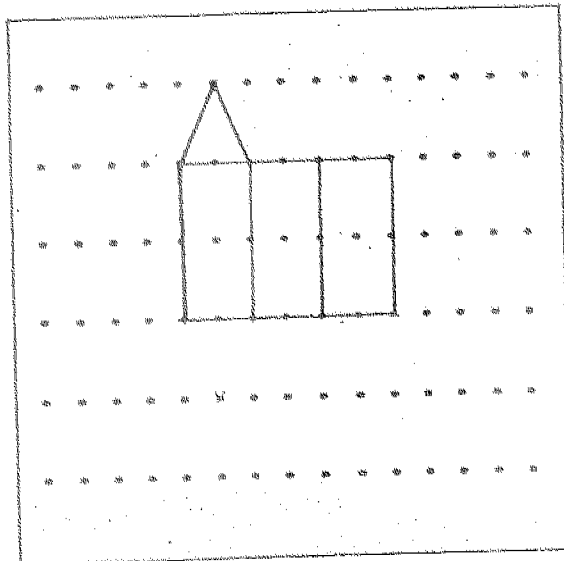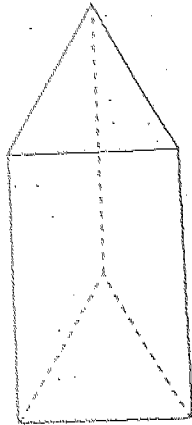Peter bought 3 kaya buns, 2 tuna buns and 1 sausage bun. He paid $_____.

Ans: $ _____

29. Mrs Tan finished cooking at 6.50 p.m. She took 45 minutes to cook the meal. At what time did she start cooking?

Ans: _____ p.m.

7

30. If $\frac{2}{3}$ of Lily's weight is $\frac{1}{4}$ of her mother's weight. What is the ratio of Lily's weight to her mother's weight?

Ans: _____

31. Complete the net of the prism below.

32. Express $\frac{43}{8}$ as a decimal correct to 2 decimal places.

Ans: _____

33. The ratio of the number of marbles in Box A to the number of marbles in Box B is 3 : 5. If $\frac{1}{3}$ of the marbles in Box A is transferred to Box B and then $\frac{1}{3}$ of the marbles in Box B is transferred to Box A, what will be the ratio of the number of marbles in Box A to the number of marbles in Box B?

(Express your answer in the simplest form)

Ans: _____

34. Jill has 10 coins that add up to $4.40. There are only 50-cent coins and 20-cent coins. How many 20-cent coins does she have?

Ans: _____

35. Shade 4 squares in the grid provided to form a figure with a perimeter of 10 units.

9
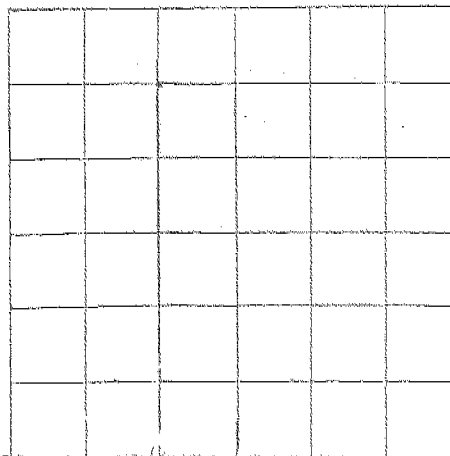
For questions 36 to 50, show your working clearly in the space below each question and write your answers in the spaces provided. The number of marks available is shown in brackets at the end of each question or part question.

36. Draw 4 unit shapes <u>around</u> the given shape to make a tessellation. (2m)
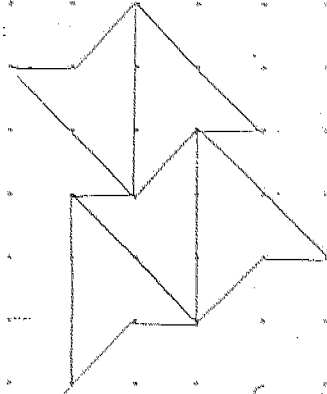
37. After Tom had spent 40% of his money on a watch, he had $90 left. How much did he have at first?
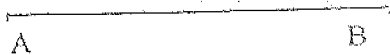
Ans: _____ (2m)

10

38. Michael had 3 times as many cards as Amy. He gave $\frac{1}{2}$ of his cards to Amy. What is the new the ratio of the number of cards Amy has to the number of cards Michael has?

Ans: _____ (2m)

39. a) Measure and write down the length of AB.
    b) Using AB, draw a rhombus, ABCD, such that ∠DAB is 80°. (2m)

A _____ B

Ans: a) _____ (1m)

40. Mrs Ang bought 44 cakes. The ratio of the number of butter cakes to the number of chocolate cakes was 6 : 5. After giving some chocolate cakes to her neighbours, Mrs Ang had twice as many butter cakes as chocolate cakes. How many chocolate cakes did she give away?

Ans: _____ (3m)

41. Mrs Chen bought $1\frac{1}{2}$ kg of sugar. She gave $\frac{2}{3}$ of it to her daughter and stored the remainder equally in 2 containers. How many kilograms of sugar were in each container?

Ans: _____ (3m)

12

42. In 2003, Salmah's monthly savings from January to August were $600. From September, he reduced his monthly savings by 20%. His total savings in 2003 were $1\frac{1}{2}$ times his total savings in 2002. What were his total savings in 2002?

Ans: _____ (4m)

43. Ravi and Ali shared a sum of money in the ratio of 4 : 7. After Ravi had spent $\frac{1}{4}$

of his money, he had $32 less than Ali.

(a) How much money had Ravi left?

(b) Ali then spent $\frac{1}{2}$ of his money. What is the ratio of the amount of money

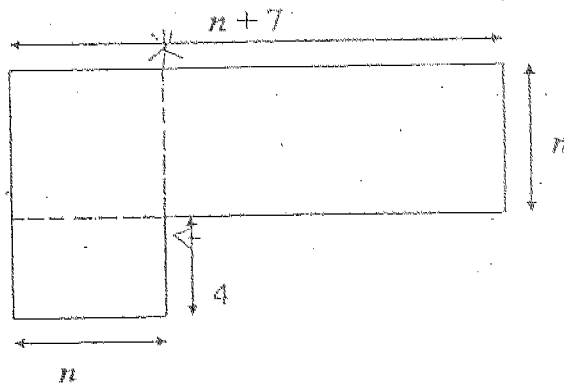Ravi has to the amount of money Ali has?

(Express your answer in the simplest form)

Ans: (a) _____ _____ (2m)

(b) _____ (2m)

14

44. The figure below is made up of 2 rectangles and a square. Its dimensions are given in cm.
    (a)   Find the perimeter of the figure in terms of n
    (b)   Find the area of the figure in terms of n

Ans: a) _____ (1m)

b) _____ , ___ (3m)

15

45. Carol's salary is $\frac{3}{8}$ of Ben's salary. David's salary is $\frac{5}{6}$ of Carol's. After Ben has

given $70 to David, David has twice as much money as Carol.

    a) How much does David have now?

    b) What is the new ratio of David's salary to Carol's salary to Ben's salary?

       (Express your answer in the simplest form.)

Ans: a) _____ (2m)

b) _____ (2m)

16

46. A skirt and 3 blouses cost $78. The skirt costs p more than a blouse.
    (a) Express the cost of a blouse in terms of p.
   (b) If $p = 10$, how much is the cost of the skirt?

Ans: (a) _____ (1m)

(b) _____ (3m)

47. A farmer had 400 animals. 20% of them were cows and the rest were goats. He bought some more cows and goats. The number of goats increased by 20% and the number of cows increased by 40%. How many animals did he buy altogether?

Ans: _____ (5m)

18

48. The graph below shows the weekly allowance of 5 children. Study it carefully and answer the questions below.
   (a) What was the average allowance of the five children?
   (b) Express Ahmad's allowance as a fraction of Ramli's allowance. (Express your answer in the simplest form.)
   (c) There was an increase in Mei Mei's allowance and the average allowance of the five children became $42. What was the increase in Mei Mei's allowance?

Pocket Money

Ans: (a) _____ (2m)

(b) _____ _ _____ (1m)

(c) _____ . _____ (2m)

19
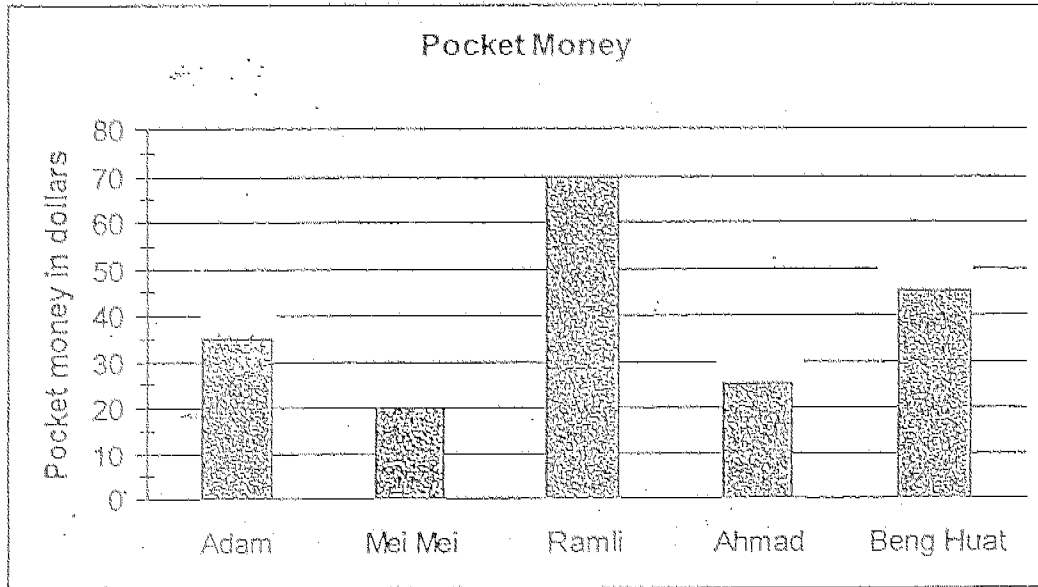
49. The tank below was 30% filled with water. Taps A and B were turned on at the same time. Water flowed from Tap A at the rate of 196cm³ per second while water flowed from Tap B at the rate of 100 cm³ per second.

a) Find the volume of the water in the tank before the taps were turned on.

   top up the voter

b) How much time was needed to fill 40% of the tank?
   (Leave your answer in minutes and seconds.)

Tap A

30cm

Tap B

40cm

80cm
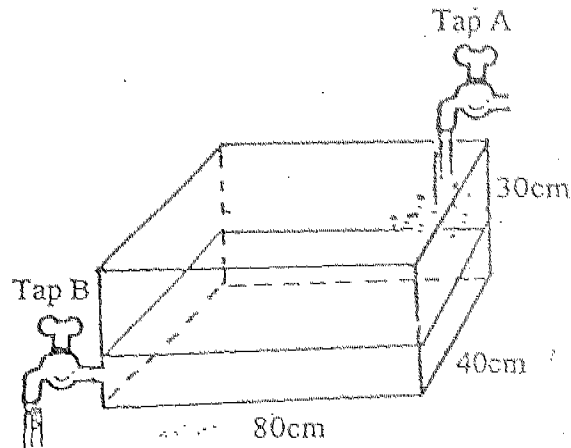
Ans: a) _____ (1m)

b) _____ (4m)

50. The figure below, not drawn to scale, is made up of 3 squares. The side of each square is a whole number. If the total area of the figure is 170cm², find the perimeter of the figure.
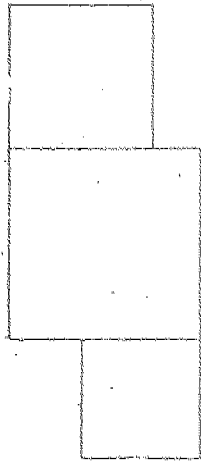
Ans: _____ (5m)

END OF PAPER
Have you checked your work?

CA1

1) 2

2) 3

3) 4

4) 3

5) 3

6) 4

7) 4

8) 2

9) 2

10) 4

11) 4

12) 1

13) 3

14) 2

15) 2

16) 6

17) 8

18) 8/25

19) 10

20) 84

21) 4 : 5 : 15

22) 6p

23) 5

24) $\frac{v - 20}{2}$

25) 5/12

26) 130

27) 8y cm

28) $ 6.45

29) 6.05

30) 3 : 8

31)

32) 5.38

33) 1 : 1

34) 2

35)

36)

37) $ 150

38) 5 : 3

39) 5.1 cm

40) 8

41) 1/4 kg

42) $ 4480

43) a) $ 24

b) 6 : 7

44) a) (4n + 22) cm

b) $(11n + n^2)$ cm^2

45) a) $ 120

b) 4 : 2 : 3

46) a) $ \frac{78-p}{4}$

b) $ 27

47) 96

48) a) $ 39

b) 5/14

c) $ 15

49) a) 28.8 1

b) 1 min 40 s

50) 62 cm