MAHA BODHI SCHOOL
2005 SEMESTRAL ASSESSMENT 1
MATHEMATICS

Name :_____(   )   Date : 10 May 2005

Class: Primary 6 (   )   Duration : 2h 15 min

Section A :   Each question from 1 to 5 carries 1 mark. Each question from 6 to 15 carries 2 marks.

For each question, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4) and shade the correct oval on the OAS.
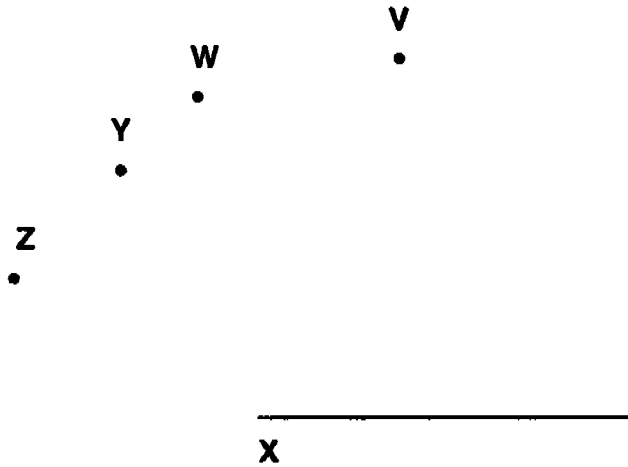
(25 marks)

1.   Which of the following, when rounded off to the nearest thousand, is 60 thousand ?

(1)   59 499
(2)   59 940
(3)   60 501
(4)   60 986

2.   A log cake weighing 1kg is cut into 8 equal pieces. What is the weight of each piece ?
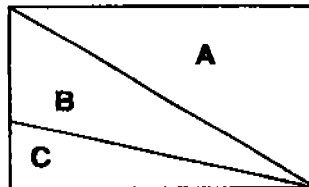
(1)   125g
(2)   12.5g
(3)   1.25g
(4)   0.125g

3.   To obtain an angle of 100° at the point **X**, which line should you draw ?

V
W
Y
Z
X _____

(1)   XZ
(2)   XY
(3)   XW
(4)   XV

4. The rectangle below is divided into 3 parts A, B and C. The area of A to C is in the ratio 3 : 1. What is the ratio of the area of B to that of A ?

(1)   2 : 5
(2)   1 : 3
(3)   2 : 1
(4)   2 : 3

2

(5) The table shows Royston's Mathematics marks for CA1 and CA2. His average score is 67 marks when rounded off to the nearest whole number. What are his possible CA3 marks ?

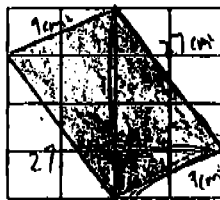| CA1	73
CA2	68
CA3	?
Average	67

(1)   60
(2)   59
(3)   58
(4)   57

6.   Find the value of 24 + 40 ÷ 4 x 2

(1)   29
(2)   32
(3)   44
(4)   68

7.   A jug is $\frac{3}{4}$ full of milk. It can fill 5 cups with milk. If John pours the milk into 3 cups, what fraction of the jug is filled with milk ?

(1) $\frac{3}{10}$

(2) $\frac{3}{20}$

(3) $\frac{9}{20}$

(4) $\frac{2}{5}$

8. If 74.5 ÷ 5 = 14.9, what is the missing number in

  74.5 ÷ ☐ = 0.149 ?

  (1) 5
  (2) 50
  (3) 500
  (4) 5000

9. Elaine bought 300 pears for $120. She threw away some bad ones and sold the good ones at $0.60 each. On the whole , she made $48. How many pears did she throw away ?

  (1) 120
  (2) 80
  (3) 40
  (4) 20

10. Miss Lim bought 2.5 kg of grapes at $19.50. How much was the price for 1 kg of the grapes ?
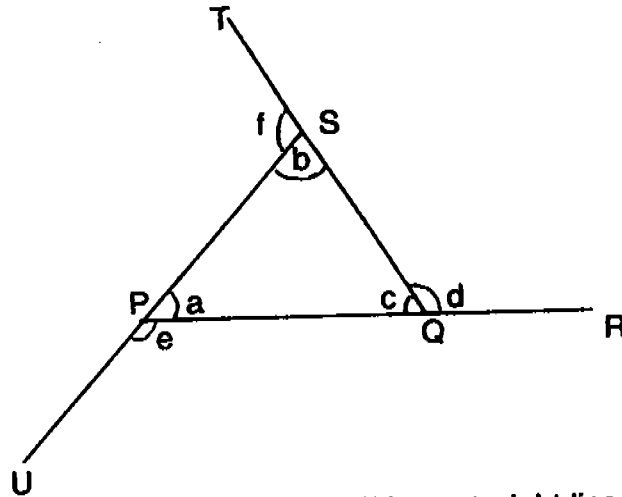
  (1) $1.95
  (2) $4.88
  (3) $7.80
  (4) $8.75

11.

The grid above is made up of squares of side 3 cm . Find the shaded area.

  (1) 8 cm²
  (2) 24 cm²
  (3) 54 cm²
  (4) 72 cm²

4

12.

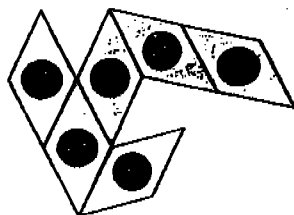In the figure, PQR, QST and SPU are straight lines. Which angle is equal to ∠b + ∠c ?

(1)   ∠f
(2)   ∠e
(3)   ∠a
(4)   ∠d

13. Mr Ho travelled $\frac{2}{5}$ of his journey at 80km/h. After which, he decreased his speed to 60km/h and completed the rest of the journey in 2h 15min. What was the total distance he travelled ?

(1)   45 km
(2)   135 km
(3)   225 km
(4)   315 km

14. Jane gave 15% of her salary to her mother. Her mother spent 40% of the sum she was given. What percentage of Jane's salary had her mother left ?

(1)   6%
(2)   9%
(3)   20%
(4)   60%

15.   Xin Er made a 6-sided solid using a net. Every face of the solid is an
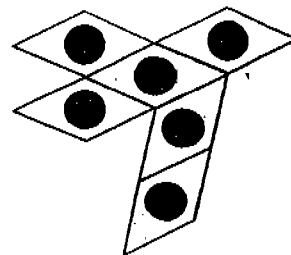   identical rhombus as shown.

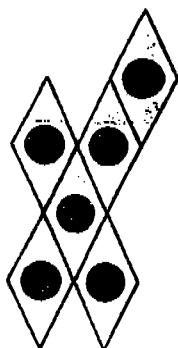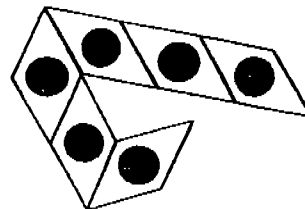Which of the following could be the net of Xin Er's solid ?
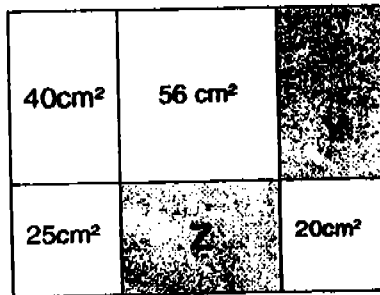
1)

2)

3)

4)

6

Section B: Questions 16 to 35 carry 1 mark each. Write your answers in the spaces provided on the answer sheet.
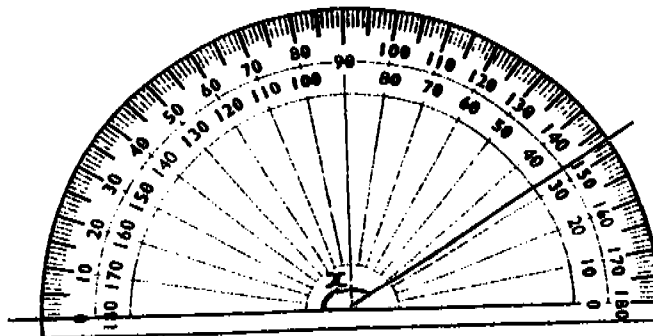Give your answers in the units stated.

(20 marks)

16   Arrange 7, 5, 9, 2 and 6 to make the greatest possible odd number.

17.   Mrs Goh has some sweets for her pupils. If she gives 4 sweets to each pupil, she will have 14 sweets left. If she gives 5 sweets to each pupil, she will have none left. How many pupils does she have ?

18.   Find the value of $2\dfrac{5}{6} - \dfrac{1}{3} + 1\dfrac{1}{2}$.

19.   Write the fraction exactly halfway between $\dfrac{7}{9}$ and $\dfrac{8}{9}$ in its simplest form.

20.   Find the value of $\dfrac{a^3 - a}{a}$ when a = 3.

21.   Margie had $50. She gave $2y to each of her 2 sons. She also gave half of what she gave to one son to her daughter. How much money had Margie left?

22.   For every $30 spent at a store, Mr Tan gets 2 lucky draw tickets. What is the least amount he must spend to get 20 lucky draw tickets ?

23.   The weight of a parcel was recorded as 6.4 kg, rounded off to 1 decimal place. If it weighed less than 6.4 kg, write down a possible weight of the parcel .
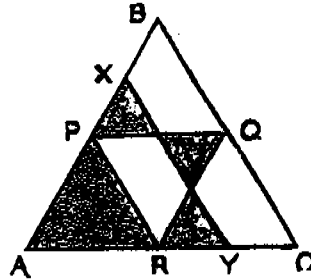
7

24. Express, as a decimal, 10 m 8 cm in metres.

25. A man takes 12 seconds to cut a log into 3 equal parts. At this rate, how many seconds would he take to cut a similar log into 9 equal parts ?

26. Along a garden path, every tree is placed 20m apart from each other. How many trees are planted along a path 160 m ?

27. A cuboid with a square base has a capacity of 768 cm³. Its height is 12 cm. Find the length of each side of its base.

28. The figure below shows a rectangle divided into 6 parts. Each part has a different area. Find the total area of Y and Z.
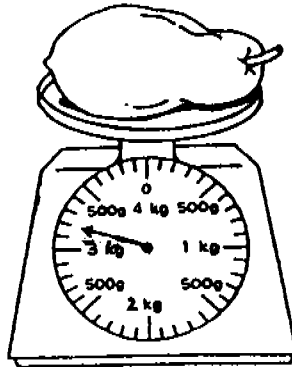
40cm²	56 cm²	
25cm²	Z	20cm²

29. What is the size of angle **x** ?

30.   If $x : y = 1 : 4$ and $x : z = 2 : 5$, what is the ratio of $x : y : z$?

31.   In the figure P, Q and R are the midpoints of the sides of the triangle
      ABC. X is the midpoint of PB and Y is the midpoint of RC. What
      percentage of this figure is **shaded** ?

32.   Meiqi spent an average of $6 per day from Monday to Friday. She spent
      an average of $13 on Saturday and Sunday. Find the average amount
      she spent per day in that week.

33.   Look at the weighing scale below. What is the weight of the papaya?
      (Give your answer in kg and g.)

34.   A fish pond was 1 km from Rick's house. Rick took 20 minutes to jog
      from his house to the fish pond and back again. What was his average
      jogging speed ?

35.   The average age of Susan and Pat is 14. If Susan is 6 years older than
      Pat, find Susan's age .

END OF PART 1

9

Section C :   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.

                                                                    (55marks)

36.   A refrigerator cost $988. Angela had $500. If she saved $50 each month,
      what would be the least whole number of months she needed to save
      enough to buy the refrigerator ?

                                    Answer: _____ [2]

37.   Jolene bought 6 kg of sugar. 0.15 of this amount was given away and the
      remainder was packed equally into 30 packets. What was the weight of
      each packet in grams?

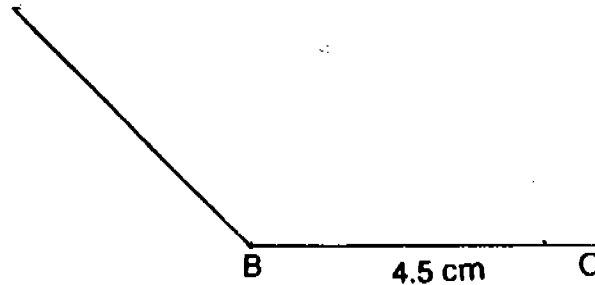   Answer: ___ ___ _____[2]

10

38.   Ailing's allowance is $\frac{3}{4}$ of Erin's. Bryan's allowance is $\frac{2}{3}$ of Ailing's. If Erin's allowance is $64, what is Bryan's allowance ?

Answer : _____ [3]

39.   1 kg of prawns cost as much as 1.5 kg of crabs. Amy paid $126 for 2 kg of prawns and 6 kg of crabs. What was the cost of 1 kg of prawns ?

Answer : _____ [3]

11

40. a) Draw a rhombus ABCD in which BC = 4.5 cm and ∠BCD = 45°.

B   4.5 cm   C

b) Measure ∠ABD.

Answer : a) Drawing   [2]

b) _____ ___[1]

41. Mrs Koh had apples and oranges in the ratio 2 : 1. After she bought another 15 apples and 60 oranges, the ratio of the number of oranges to the number of apples became 2 : 1. How many oranges had Mrs Koh at first ?

Answer : _____ _ _[3]

12

42.   NTUC sells 2 brands of groundnuts, A and B.

<div align="center">

400 g

500 g

Brand A
$2.50

Brand B
$3.50

</div>

a)   What is the price per kg of Brand B groundnuts ?

b)   Mrs Tan wants to buy a certain amount of groundnuts. She will
       save $5.25 by buying Brand A instead of Brand B. What is the
       amount of groundnuts that Mrs Tan wants to buy ? (Give your
       answer in kg)

Answer : a)_____ [1]

b)_____ [3]

13

43. Ruth and Julia went shopping with $188. After Ruth had spent $\frac{3}{5}$ of her money and Julia had spent $23, Ruth found that the amount she had left was $\frac{1}{3}$ of what Julia had left.

    a) How much money had Julia at first ?

    b) What percentage of Julia's money was left ? (Round off your answer to 1 decimal place)

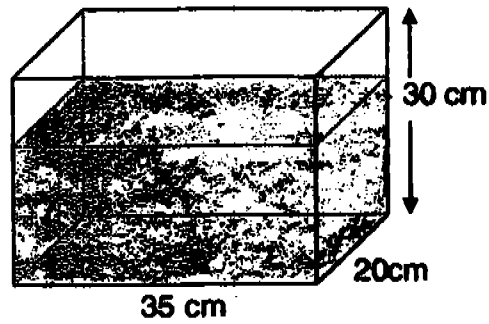   Answer: a) _____ [3]

    b) _____[1]

44.   The table below shows the booking fees charged by a taxi company.

	Fee
Current booking Monday to Saturday	$3.20
Advance Booking Monday to Saturday	$5.20

Jimmy earned a total of $81.20 from booking fees over some days. If he had twice as many current bookings as advance bookings, how many current bookings did he receive ?

Answer: _____ [4]

15

45.

The tank above is $\frac{4}{5}$ filled with water. When 28 identical metal cubes are put into the tank, the water level rises to 29 cm.

a) Find the volume of water in the tank.

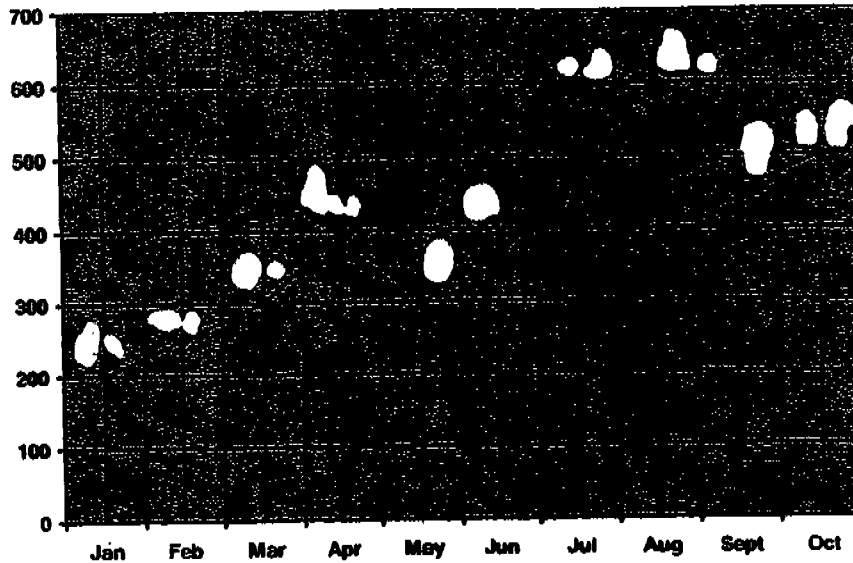b) What is the length of each side of the cube ?

Answer : a)_____ [1]

b) _____ [3]

16

46. The ratio of Peng's money to Cleo's money was 6 :1. After Peng gave $12 to Cleo, the ratio of his money to Cleo's money became 3 :1. How much money did Peng have at first ?

Answer : _____ [4]

17

47. The line graph shows the amount of money earned by a stallholder for the
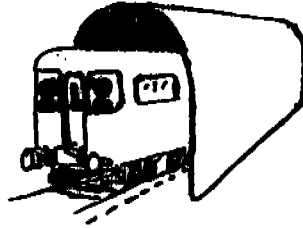   first 10 months of the year.

a) What was the total amount of money collected from January to
    June ?

                              Answer : a) _____ _____ [1]

b) If the amount of money made for the second half of the year was
    80% more than that for the first half of the year, find the total
    amount collected in November and December.

                              Answer : b)_____ _____ [3]

18

48.   A goods train 200m long has to travel through a tunnel which is 300m
       long. The train is moving at 60 km/h. For how many seconds is the whole
       train in the tunnel ?

Answer : _____ [5]

49. Mala earned a fixed monthly salary. In November she saved 40% of it. In December she saved 75% more than what she saved in November. Her total savings for the 2 months is $935.

a) What was her monthly salary?

b) How much more money did she spend in November?

Answer : a) _____ _____ [3]

b) _____ ___[2]

20

50. Harish put aside one 20-cent coin as her savings on the first day. The next day she put aside three 20-cent coins as her savings. Each day she put aside two 20-cent coins more than the previous day.

a) Complete the table below.

Day		
1	1	1
2	3	4
3		
4		
5		

[2]

b) How many 20-cent coins did Harish save on the 25th day ?

Answer : b)_____[2]

c) When Harish had saved 121 coins altogether, what day would it be ?

Remember to check your work !
Every mark counts.

Answer : c)_____ [1]

END OF PART 2

MAHA BODHI SCHOOL
2005 SEMESTRAL ASSESSMENT 1
MATHEMATICS
PRIMARY SIX

1) 2

2) 1

3) 3

4) 4

5) 2

6) 3

7) 1

8) 3

9) 4

10) 3

11) 4

12) 2

13) 3

14) 2

15) 1

16) 97625

17) 14

18) 4

19) 5/6

20) 8

21) $(50-5y)

22) $ 300

23) 6.39

24) 10.08

25) 48

26) 9

27) 8

28) 67

29) 147

30) 2 : 8 : 5

31) 43.75

32) 8

33) 3 kg 200 g

34) 6

35) 17

36) 10

37) 170 g

38) $ 32

39) $ 21

40)

41) 10 oranges

42) a) $ 7   b) 7 kg

43) a) $ 113 b) 79.6%

44) 14

45) a) 16800 cn^3 b) 5 cm

46) $ 96

47) a) $ 1800   b) $ 1140

48) 6 seconds

49) a) $ 850   b) $ 255

50) a) 5   9
        7   16
        9   25   b) 49 coins   c) 11