Maha Bodhi School

2008 Preliminary Examination

Mathematics

Name : _____ (   )   Date   : 19 August 2008

Class : Pr 6 _____   Duration : 2 h 15 min


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

1.   0.357 is the same as _____ .

   (1) 3.57×10
   (2) 35.7×100
   (3) $35.7 \div 100$
   (4) $35.7 \div 10$

2.   How many eighths are there in $2\frac{3}{4}$?

   (1)   6
   (2)   9
   (3)   11
   (4)   22

3.   Sue had 5 coins in denominations of 50¢ , 20¢ and 5¢. Which one of the following could be the amount she had ?

   (1) $1.05
   (2) $1.15
   (3) $1.50
   (4) $1.95

1

4.   The jackfruit on the weighing scale has a mass of _____.
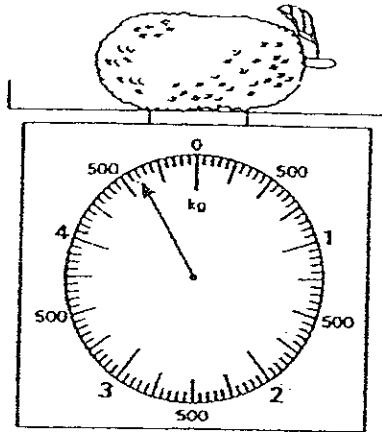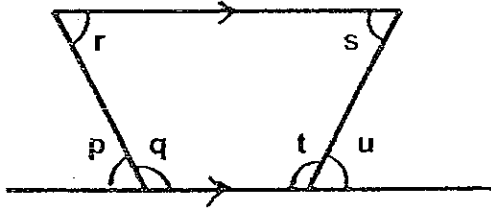

(1)   4 kg 510 g
(2)   4 kg 520 g
(3)   .4 kg 540 g
(4)   4 kg 600 g

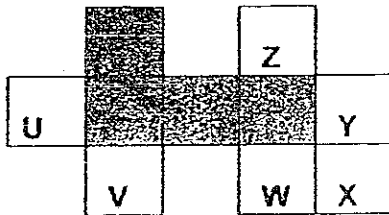5.   Which one of the following figures has the smallest **unshaded** area?

109
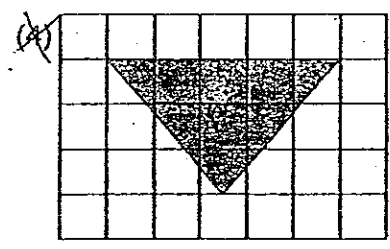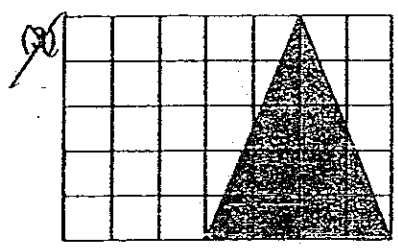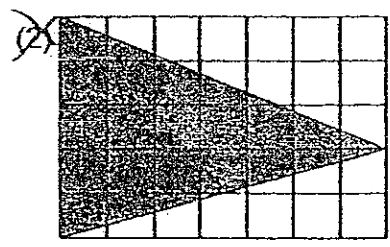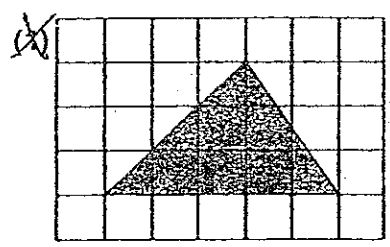
6. In the figure, $\angle p + \angle q = \angle s +$ _____ .

(1) $\angle q$
(2) $\angle r$
(3) $\angle u$
(4) $\angle t$

7. The shaded squares below show an incomplete net of a cube. Which two of the following squares U , V, W , X , Y and Z should be added to form the net ?

(1) U and Z
(2) V and W
(3) W and Z
(4) X and Y

8. The mass of butter, flour and sugar are mixed in the ratio 3 : 5 : 4 to bake a cake. If the mass of the cake is 720 g, find the mass of butter used .

(1) 60 g
(2) 180 g
(3) 300 g
(4) 240 g

3

(10

9. A photocopier can print 40 copies in $\frac{1}{2}$ h.

    At this rate, how many copies can it print in $1\frac{1}{2}$ h ?

    (1) 60
    (2) 80
    (3) 120
    (4) 160

10. Mrs Lim bought 3 ducks weighing 2.5 kg, 2.5 kg and 2.8 kg. What is the average mass of the ducks ?

    (1) 2.50 kg
    (2) 2.60 kg
    (3) 2.65 kg
    (4) 7.80 kg

11. A carpenter uses nails along the edges of a square board such that there are 25 nails on each side of the square. How many nails does the carpenter use altogether ?

    (1) 92
    (2) 96
    (3) 98
    (4) 100

12. Which one of the following fractions is greater than $\frac{1}{3}$?

    (1) $\frac{8}{23}$

    (2) $\frac{6}{19}$

    (3) $\frac{4}{13}$

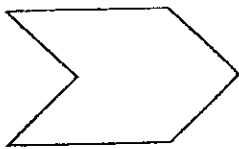   (4) $\frac{10}{31}$

13. Express $1\frac{1}{2}\%$ as a decimal.

   (1)   1.5
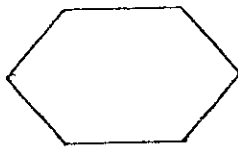   (2)   0.15
   (3)   0.015
   (4)   0.0015

14. Mrs Velu bought $\frac{1}{2}\ell$ of soya bean drink. She drank $\frac{1}{5}$ of it and gave the remainder to her daughter. How much of the drink did her daughter get ?

   (1) $\frac{3}{10}\ell$
   (2) $\frac{1}{10}\ell$
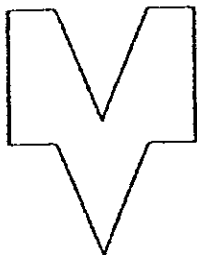   (3) $\frac{4}{5}\ell$
   (4) $\frac{2}{5}\ell$

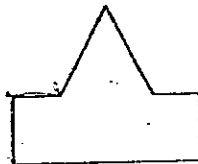15. Which one of the following shapes does not tessellate?

(1)

(2)

(3)

(4)

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Parent's Signature : _____

Section A (20 marks)	
Section B (30 marks)	
Section C (50 marks)	
Total (100 marks)	

BOOKLET B

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. $144 - (63 + 9) + 9 \times 4$
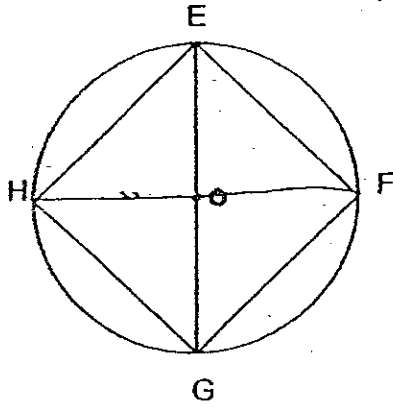
Ans : _____

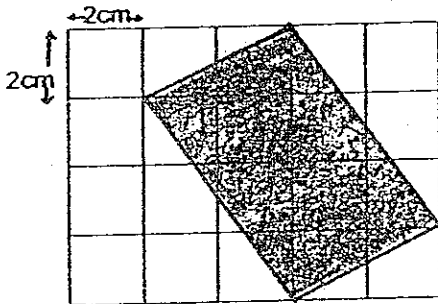17.   Round off 59.95 to 1 decimal place.

Ans : _____

18.

The figure shows a rectangle. Half of it is shaded.
Draw a line of symmetry on the figure above.

113

19. · The figure shows a square EFGH and a circle. O is the centre of the circle. EG = 16 cm. What is the area of the square?
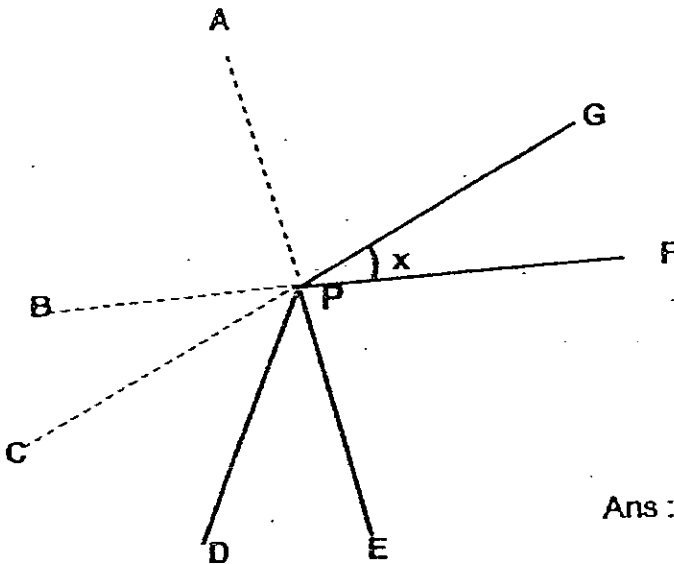

E

H   F

O

G   Ans :_____cm²

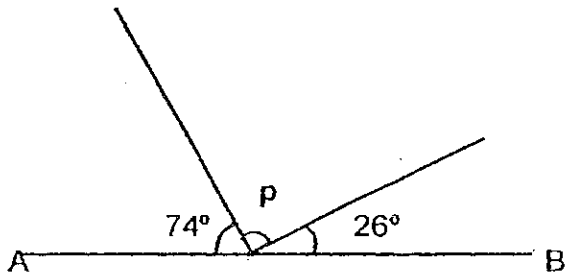20. The grid below is made up of squares of side 2 cm. Find the shaded area.

←2cm→

2cm

Ans :_____cm²

21. The figure below, not drawn to scale, shows ∠x at point P. AE ,BFand CG are straight lines. Name the angle which is the same size as ∠x.

A

G

F

x

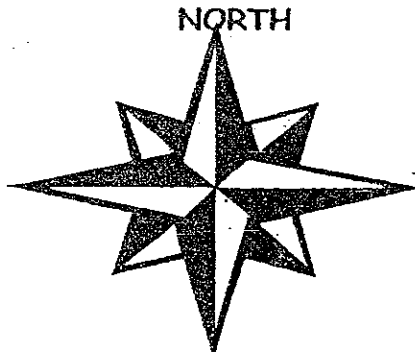B

P

C

Ans :_____

D   E

114

7

22.

In the diagram above, not drawn to scale , AB is a straight line.
Find $\angle p$.

Ans : _____ $^{\circ}$

23.   If $x = 6$, what is the value of $3x + \dfrac{x}{3}$.

Ans : _____

24.   The diagram below shows an 8-point compass. Study it carefully and answer the question below.

NORTH

If Mr Sim is facing north and he turns 315° clockwise, in which direction will he be facing ?

Ans : _____

8

25. Mr Lim hired a car for 3 days. He was charged $240 per day and $0.60 for every kilometre he travelled. He paid a total of $1236. What was the total distance he travelled for the 3 days ?

Ans : _____ km

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.
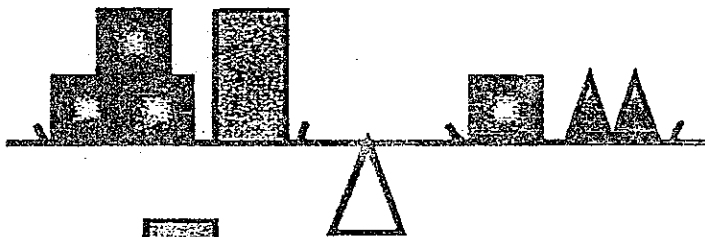For questions which require units, give your answers in the units stated. (20 marks)

26.
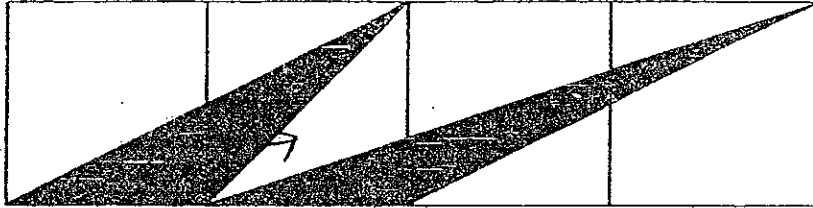
The diagram above is made up of 4 identical squares. What fraction of the figure is shaded ?

Ans:_____

27.

If the mass of [image] is twice as much as each [image] and the

mass of each [image] is 125 g, how much is the mass of each [triangle] ?

Ans: _____ g

\1 7

28. The figure below, not drawn to scale, is made up of a rectangle and a triangle. Find the area of the figure.

10 cm

6 cm

8 cm

3 cm
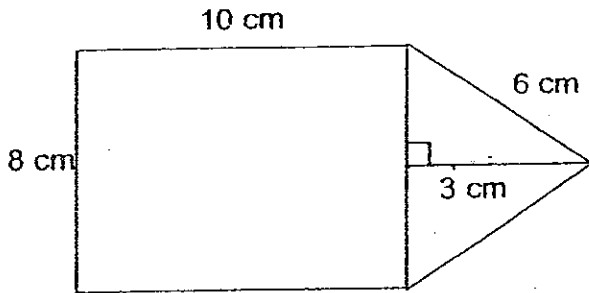
Ans : _____ cm²

29. The area of one face of a cube is 81 cm².
Find its volume.

81 cm²
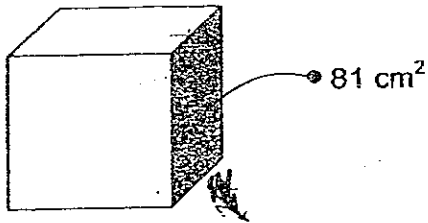
Ans : _____ cm³

30. My mother bought an equal number of oranges and apples for a party.
The oranges were sold at 3 for $2. The apples were sold at 4 for $3.
She paid $3 more for the apples than the oranges. How much did she pay in all ?

Ans : $ _____

118

11

31. Ali has p marbles. Jason has twice as many marbles as Ali.
     Jason has 6 marbles more than Samy. How many marbles do the boys
     have altogether ?

Ans : _____ marbles

32. $\angle a + \angle b + \angle c + \angle d =$ [box] °
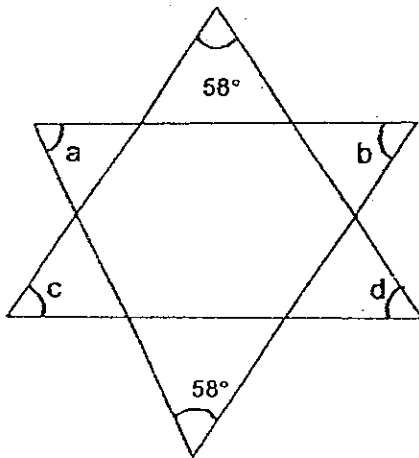
Ans : _____ °
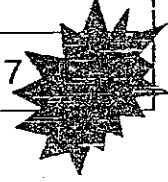
33. Miss Leong had some beads. 40% of them were red and the rest were green. She
     used all the red beads and $\frac{1}{5}$ of the green ones to make a necklace.
     What percentage of her beads were used ?

Ans : _____ %

11%

34.

English Language	84
Chinese Language	90
Mathematics	82
Science	7

Elise spilled some ink on her result slip.
The average mark of the 4 subjects is 83.
How many marks did she score for Science?

Ans :_____ marks

35. A chair is $\frac{3}{7}$ the mass of a table. When Ali sits on the chair,

their combined mass is $\frac{2}{3}$ the mass of the table.

What is the ratio of Ali's mass to the mass of the chair ?

Ans :_____

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 brackets [ ] at the end of each question or part-question.

36.   If Yvonne buys 2 kg of prawns, she will have $28.90 left. If she buys 5 kg of prawns, she will have $10.60 left. How much money does Yvonne have?
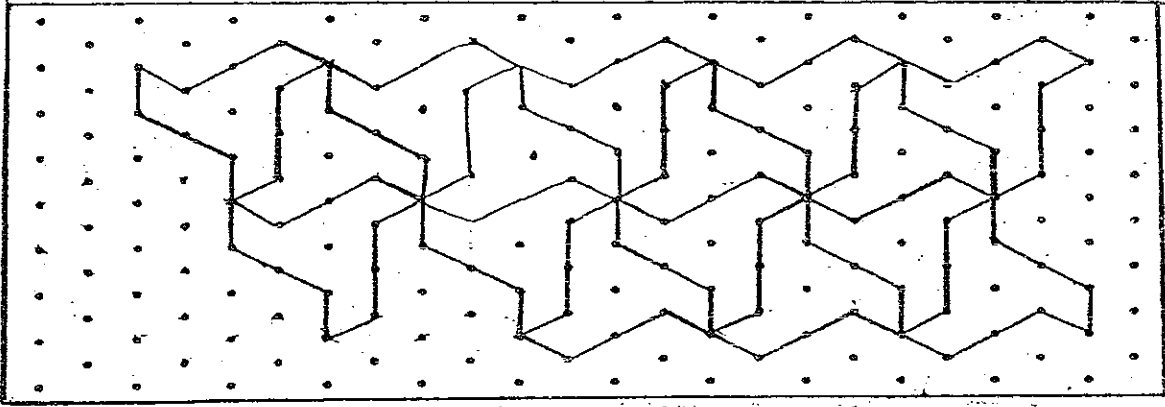
Ans : _____ [3]

37.   Mrs Ang bought some cookies. She gave 30% of the cookies to her niece and ate 40% of the remaining cookies. If she had 42 cookies left, how many cookies did she buy?

Ans : _____ [3]

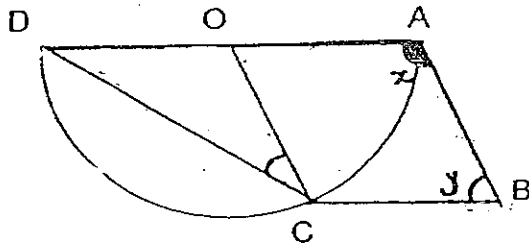38. The pattern in the box shows part of a tessellation.

(a) Shade the unit shape in the tessellation. [1]

(b) Extend the tessellation by drawing 4 unit shapes in the space provided within the box. [2]

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39. In the figure, O is the centre of a semicircle and OABC is a rhombus.
Given that $\angle OCD = 28°$, find

(a) $\angle x$
(b) $\angle y$

Ans : a) _____ [2]

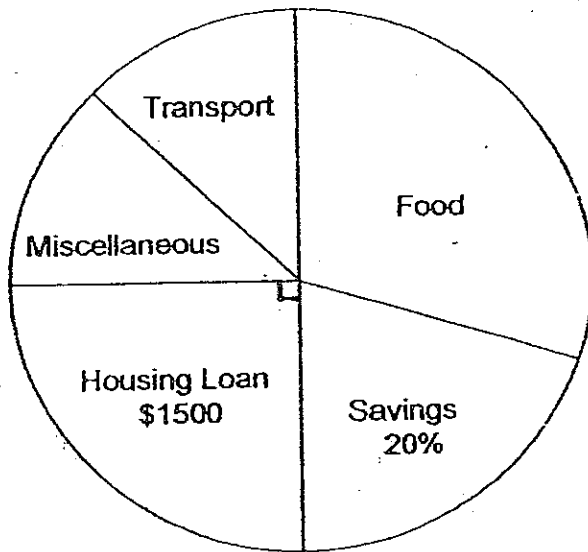   b) _____ [1]

15

40.

Mr Ken's monthly expenditure for the month of May

The pie chart above shows how Mr Ken used his monthly salary in May.

(a)   How much did Mr Ken save?

(b)   In July, Mr Ken's salary increased by 5%. If he saved the
        same amount of money in July as in May, what fraction of
        his July salary did he save?

Ans : a) _____ [1]

b) _____ [2]

[2-3

16

X1. The number of pupils in Primary 6C is 2 more than the number of pupils in Primary 6D. There are 22 boys in Primary 6C and 16 boys in Primary 6D. The number of girls in Primary 6C is $\frac{4}{5}$ of the number of girls in Primary 6D.

What fraction of the pupils in Primary 6C are girls ?

Ans : _____[4]

124

42. The entrance fee to an exhibition was $4 for each adult and $3 for each student. If the total amount collected was $73 260, and the number of students was 11 times the number of adults, how many students were at the exhibition ?

Ans : _____ [4]

12S

18

43. The figure below shows a school field which is made up of
a rectangle and 2 semicircles. All round the field is a track 7 m wide.
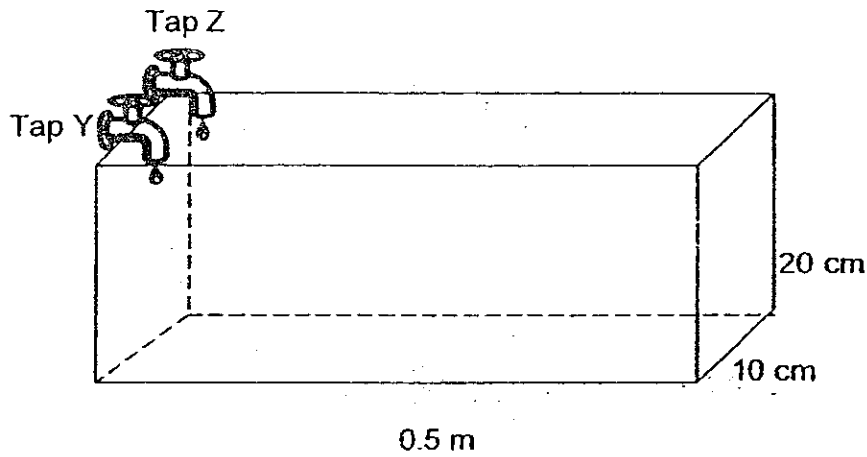

14 m   Field

78 m
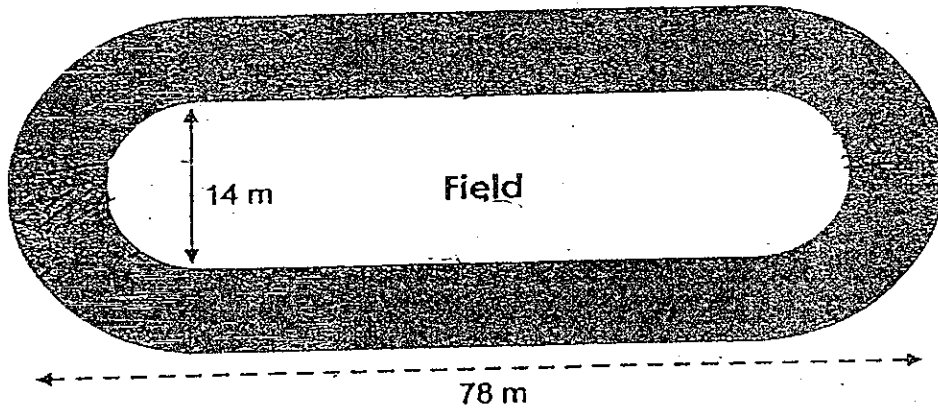
(a) What is the shortest distance covered by Mark if he runs round the track once ?

(b) Find the area of the track. [Take $\pi = \dfrac{22}{7}$]

Ans : a)_____[2]

b) _____[2]

19

44.

Tap Z

Tap Y

20 cm

10 cm

0.5 m

A rectangular container measuring 0.5 m by 10 cm by 20 cm is empty at first. Benny turns on Tap Y and water flows out at the rate of 1.5 litres per minute. 2 minutes later , he turns on Tap Z and water flows out at the rate of 1.3 litres per minute. How long does it take to completely fill up the container ?   (Give your answer in minutes and seconds.)

Ans : _____ [4]

127

48. Juyi had a total of 208 cheese and tuna buns in the ratio 7 : 6. After she gave away an equal number of each type of bun, the number of cheese and tuna buns left was in the ratio 7 : 3 .

a) Did the fraction of tuna buns that Juyi had increase, decrease or remain the same ?

b) How many buns did she give away ?

Ans :a) _____[1]

b) _____ [3]

138

46. Below is a table showing the prices of some toys. Study it carefully and answer the questions below.

Items	Total Cost
toy boats rattles	**$32.40**
ball	**$33.00**
	$20.20

a) What is the price of the ball ?

b) What is the price of 5 toy boats ?

Ans ; a)_____[3]

      b) _____[2]

129

47. Teddy saves 80% as much as Meifen and Roy saves 30% as much as Teddy. Meifen uses 16% of her savings to buy 8 similar pens. Each pen costs $4. How much does Roy save?

Ans : _____ [5]

/30

48 Azman and Dollah took part in a cross-country race.
Azman's average speed was 72 m/min faster than Dollah.

When Azman completed the whole race in $\frac{1}{3}$ h , Dollah had only completed

$\frac{4}{7}$ of the race. Find

a)   Dollah's average speed and

b)   the time taken by Dollah to complete the race .

Ans : (a)_____[3]

(b)_____[2]

Remember to check your work!
Every mark counts.

—End of Paper —

/3/

24

ANSWER SHEET

EXAM PAPER 2008

SCHOOL   : MAHA BODHI PRIMARY SCHOOL
SUBJECT : PRIMARY 6 MATHEMATICS

TERM   : PRELIMINARY SA 2

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

16)112   17)60.0   18)   19)128cm$_2$ 20)32cm$_2$

21)LBPC   22)80°   23)20   24)North-West

25)860km   26) ¼   27)250g   28)92cm$_2$ 29)729cm$_3$

30)$ 31)(5p-6)   32)244°   33)52%   34)76 marks

35)5:9

36)Difference in weight→5kg-2kg=3kg
   Difference in money→$28.90-$10.60=$18.30
   $18.30÷3=$6.10
   $6.10x2=$12.20
   $28.90+$12.20=$41.10
She has $41.10

37) 10-4=6

(42÷6)x10=70

She had 70 cookies before eating.

(70÷7)x10=100

She bought 100 cookies.

38) a)b)
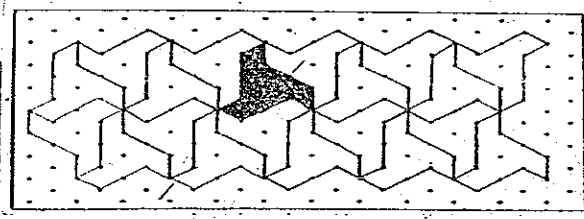
39) a)180° -(28° x2)=124°

180° -124° =56° (∠AOC)

180° -56° =124°

∠X is 124°

b)180° -124° =56°

∠Y is 56°

40) a)100%÷4=25%

$1500→25%

($1500÷25)x20=$1200

He saved $1200 per month

b)($1500÷25)x100=$1600   (salary of May)

($6000÷100)x105=$6300 (salary of July)

$1200 = 4
$6300   21

He saved 4 of his July salary
        21

41) 1 unit→ 22-16-2=4

 4 units→16

 No.of Girls in 6c→16

 16+22=38   (Enrolment in 6c)

 $\frac{16}{38}=\frac{8}{19}$

42) $3 \times 11=\$33$

 $\$33+\$4=\$37$

 $\$73260 \div \$37=\$1980$

 $1980 \times 11=21780$

 There were 21780 students.

43)a) 14m+7m+7m=28m

 78m-28m=50m

 $\frac{22}{7} \times 14m=44m$ (circumference of circle)

 44m+(50m×2)=144m

 The shortest distance would be 144m

 b)(7m×50m)×2=700m

 $\frac{22}{7} \times 7 \times 7=154m^2$

 $\frac{22}{7} \times 14 \times 14=616m^2$

 $616m^2-154m^2=462m^2$

 $462m^2+700m^2=1162m^2$

 The area is 1162m²

44) 0.5→50cm

 50cm×10cm×20cm=10000cm³ =10L

 1.5L×2min=3L

 10L-3L=7L

 1.5L+1.3L2.8L

 7L÷2.8L=2.5min=2min 30sec

 2min 30sec+2min=4min 30sec

 It takes 4min 30sec to fill it up.

45)a)fraction of tuna buns at first → $\frac{6}{7+6} = \frac{6}{13}$

Fraction of tuna buns after → $\frac{3}{7+3} = \frac{3}{10}$

Fraction of tuna buns had decreased

b)No.of tuna buns at first → $\frac{6}{13} \times 208 = 96$

Difference → 112-96=16

4 units → 16

1 unit → 4

10 units → 40

208-40=168

She gave 168 buns away.

46)a)$33-$20.20=$12.80   (2 price of rattles)
   $12.80÷2=$6.40   (1 price of rattle)
   $32.40-$12.80=$19.60 (2 price of boats)
   $19.60÷2=$9.80   (1 price of boat)
   $9.80+$6.40=$16.20
   $20.20-$16.20=$4
   1 ball cost $4

b)$9.80x5=$49
  The price is $49

47)$4x8=$32
   $32÷16=$2
   1% of Mei fen savings → $2
   $2x100=$200
   Mei fen saves $200
   ($200÷10)x8=$160
  Teddy saves $160
   ($160÷10)x3=$48
   Roy saves $48

48)a)72m/minx $\frac{1}{3}$ h=1440m (distance)

   3 units→1440
   4 units→$\frac{1440}{3}$ x 4=1920

   Dollah's average speed→1920÷20=96m/min

 b)1/3 h =20min
   4/7→20min
   1/7→20÷4=5min
   7/7→7x5=35min
   Time taken by Dollah to complete the rate is 35 min.