METHODIST GIRLS' SCHOOL (Primary)
End-of-Year Examination 2006
Primary 5

Mathematics

Booklet A

Name: _____ ( )

Class: P 5. _____

Total time for Booklets A, B1 and B2: 2h 15 min

DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO.

FOLLOW THE INSTRUCTIONS CAREFULLY.

ANSWER ALL QUESTIONS.

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.

(20 marks)

1. 7 536 100 = 7 000 000 + 500 000 + _____ + 6 000

   (1) 3 000
   (2) 3 100
   (3) 30 000
   (4) 30 100

2. Round off 135 495 to the nearest hundred.

   (1) 135 000
   (2) 135 400
   (3) 135 500
   (4) 136 000

3. 3 070 less than 810 730 is _____.

   (1) 807 660
   (2) 807 740
   (3) 813 740
   (4) 813 800

4. Find the difference between $7\frac{3}{5}$ and $10\frac{1}{5}$.

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

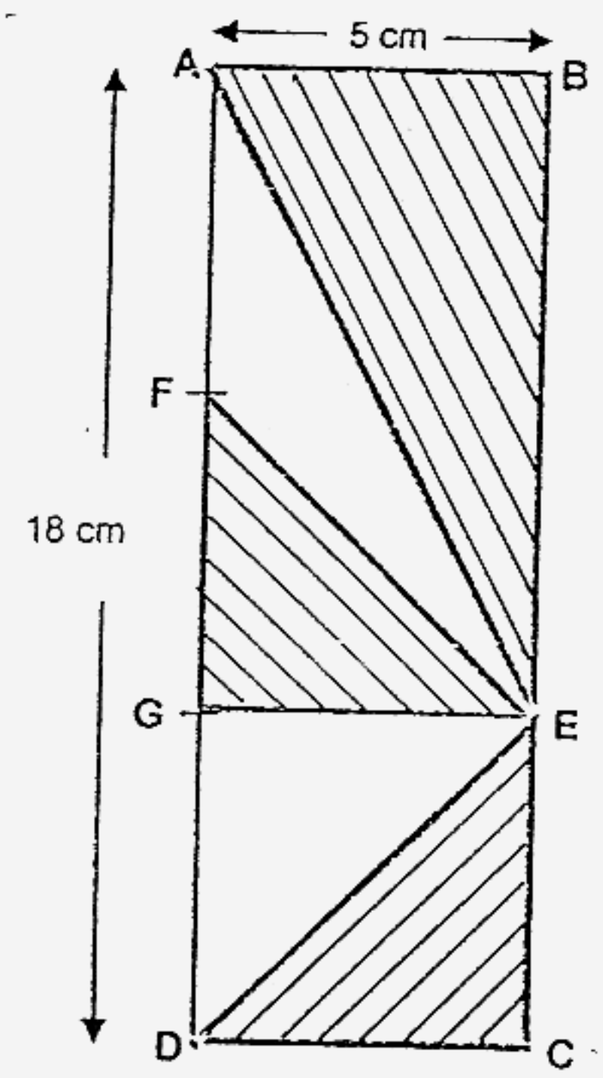
5. Shamir and Dinah had an equal number of postcards.
   Dinah gave 72 of her postcards to Shamir.
   How many <u>more</u> postcards does Shamir have than Dinah now?

   (1) 36
   (2) 108
   (3) 144
   (4) 252

6. The ratio of the number of oranges to the number of apples is 3 : 1.
The ratio of the number of guavas to the number of oranges is 1 : 6.
If there are 60 guavas, find the number of apples.

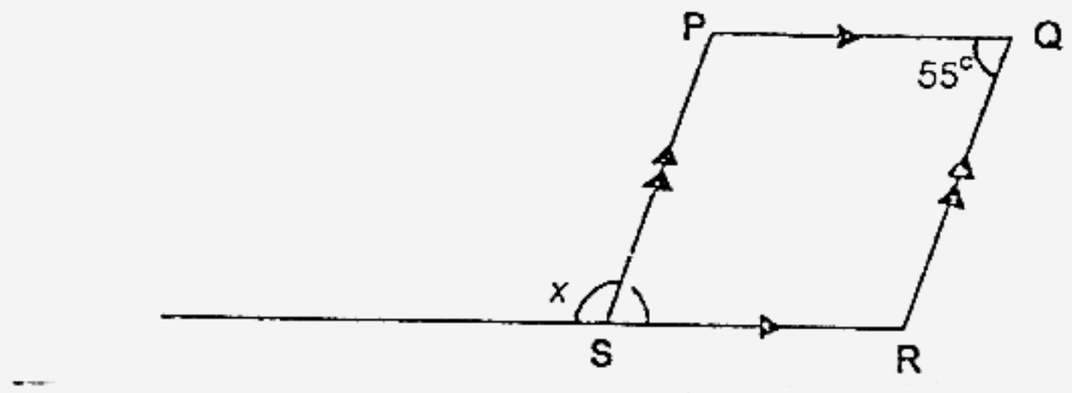
(1) 20
(2) 30
(3) 120
(4) 360

7. The figure below shows the rectangle ABCD.
BE is twice the length of EC and AF = FG = GD.
Find the total area of the unshaded parts.



(1) 15 cm^2
(2) 30 cm^2
(3) 45 cm^2
(4) 60 cm^2

8. PQRS is a parallelogram. Find the value of $\angle x$.



(1) 125°
(2) 135°
(3) 145°
(4) 155°

9. Express $\frac{7}{8}$ as a percentage.

(1) 0.875 %
(2) 8.75 %
(3) 87.5 %
(4) 875 %

10. There are 14 girls and 42 boys in a lecture room. What percentage of the number of pupils in the room are boys?

(1) 28 %
(2) 33 %
(3) 45 %
(4) 75 %

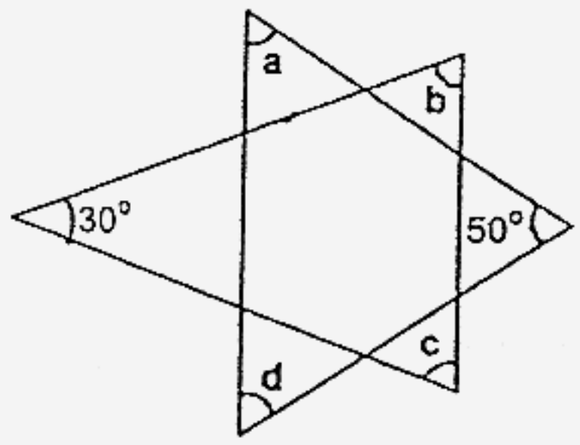
11. The sum of two numbers is 210. The first number is one and a half times the second number. What is the difference between the two numbers?

(1) 21
(2) 42
(3) 84
(4) 136

12. The average of two numbers is 80. If one number is 30 more than the other, what is the smaller number?

(1) 50
(2) 65
(3) 130
(4) 160

13. The figure below is made up of two triangles.
Find ∠ a + ∠b + ∠c + ∠d.



(1) 130 °
(2) 140 °
(3) 150 °
(4) 280 °

14. A car uses 5 litres of petrol to travel 60 km.
How far can it travel on 11 litres of petrol?

(1) 12 km
(2) 55 km
(3) 120 km
(4) 132 km

15. Evaluate 32 – 0 X 15 + 3 ÷ 3.

(1) 18
(2) 33
(3) 35
(4) 161

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. What is the sum of the values of the digit '5' in 352 546?

Ans: _____

17. How many hundreds are there in one million?

Ans: _____

18. Esther made 280 muffins. She kept $\frac{3}{7}$ of them for her family and gave the rest to her friends. How many muffins did Esther give to her friends?

Ans: _____

19. There are 126 girls in a school. The ratio of the number of boys to the number of girls in the school is 3 : 1. Find the total number of pupils in the school.

Ans: _____

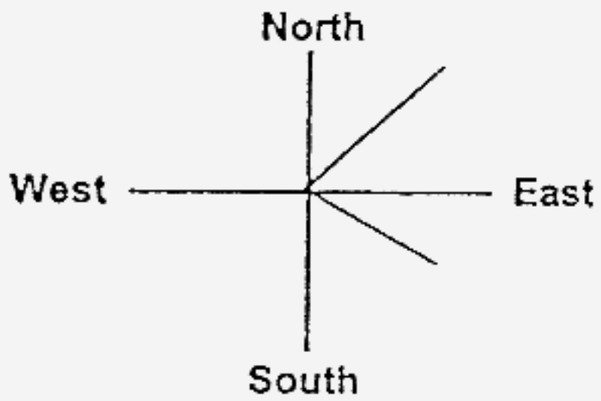
20. Karen is 2 years old and Maria is 32 months old. Find the ratio of Karen's age to Maria's age. Give your answer in the simplest form.

Ans: _____

21. Roger had a box of marbles. He gave 20 marbles to Jim, 25 marbles to Kenny and kept the rest for himself. Roger found out that Jim had received 40% of the marbles in his box. What percentage of the marbles did Kenny get?

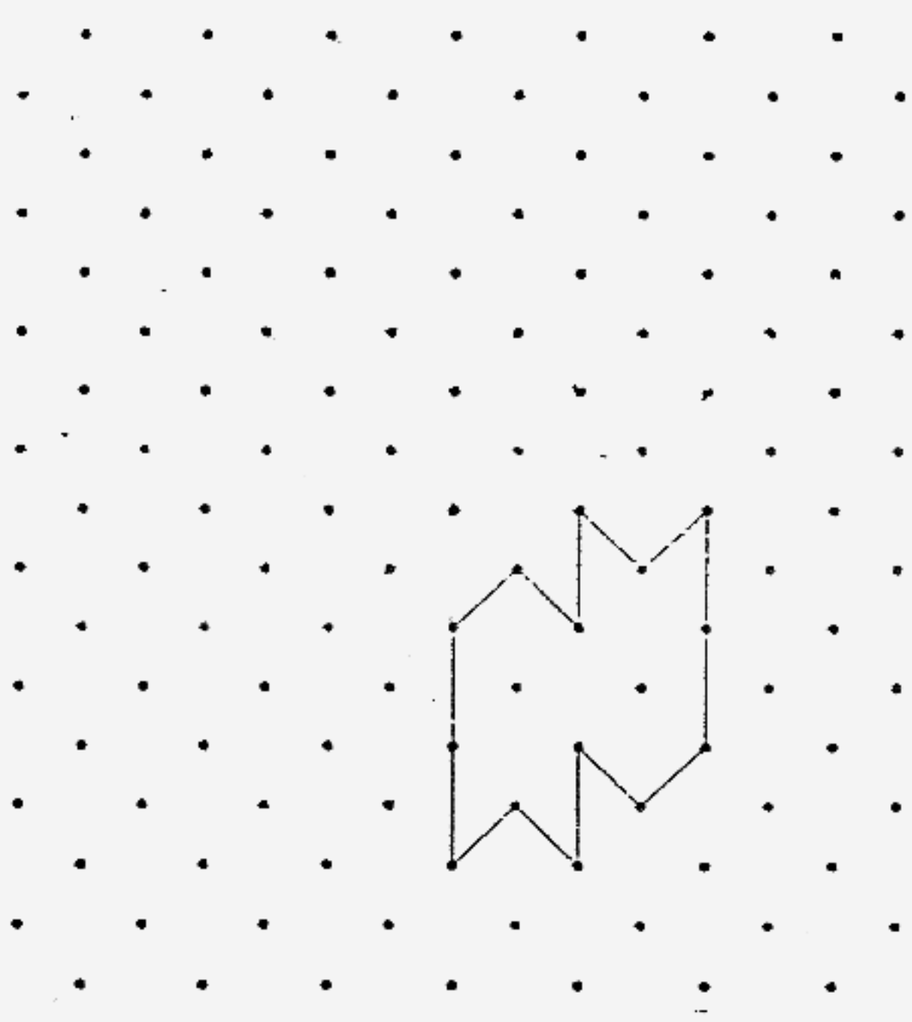
Ans: _____ %

22. Joseph is facing North-East. If he turns 180°, which direction will he be facing?



Ans: _____

23. Use the given shape to make a tessellation in the space provided by adding **five** more unit shapes.



24. Find the product of 10.01 and 42.

Ans: _____

25. Divide 64.16 by 8.

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)

26. The total mass of Alex, Brian and Charlie is 158 kg. Brian is 10 kg heavier than Alex. If Alex's mass is 55 kg, find Charlie's mass.

Ans: _____ kg

27. A blouse costs $26.30. It is $12.50 cheaper than a skirt. Find the total cost of both the blouse and the skirt.

Ans: $ _____

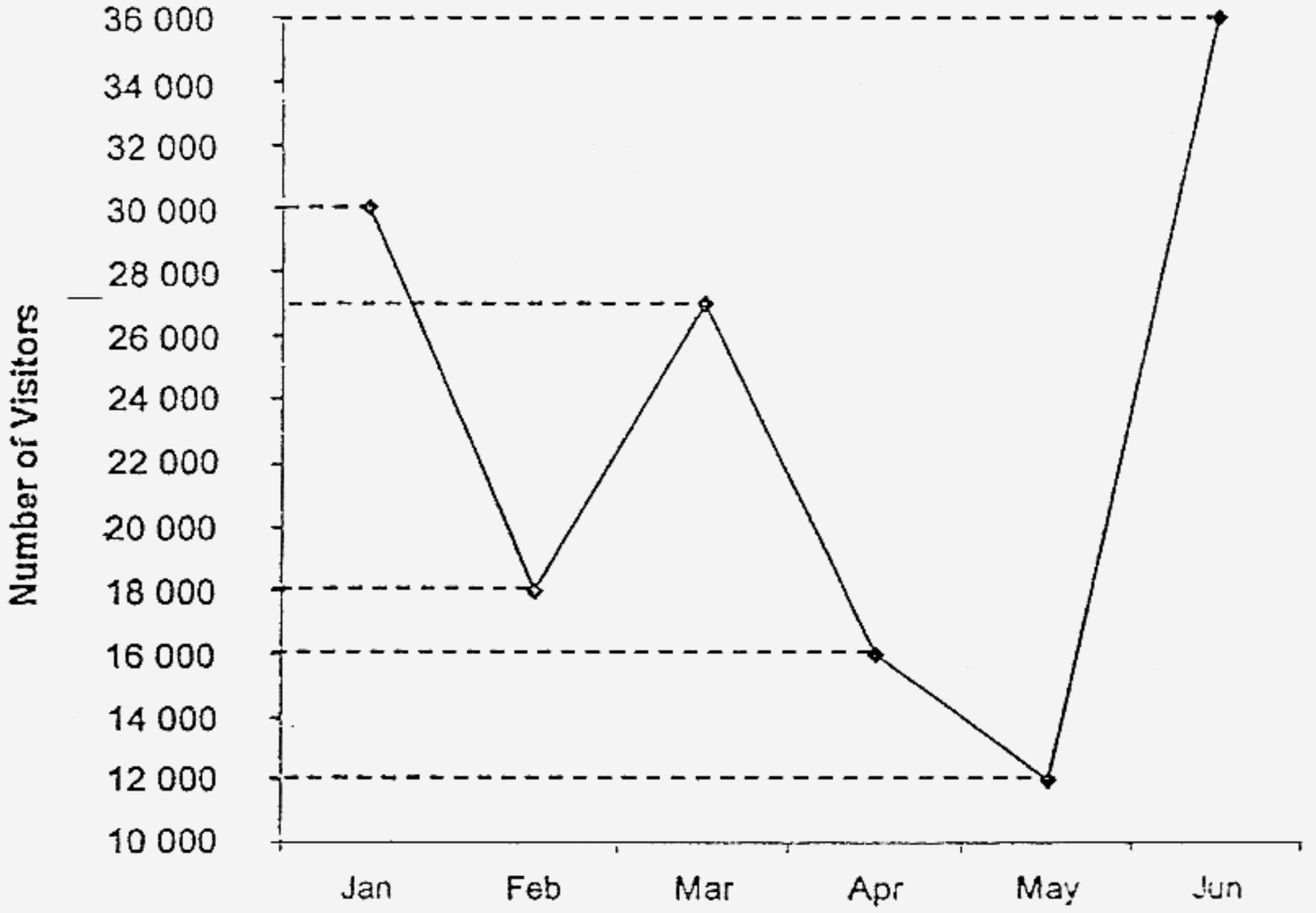
28. $\frac{3}{5}$ of Lena's savings is as much as $\frac{1}{3}$ of Jen's savings. Jen has $152 more than Lena. How much money does Jen have?

Ans: $ _____.

29. There are 38 rows of seats in a cinema. There are 42 seats in each row. $\frac{2}{3}$ of the seats are occupied. How many seats are **not** occupied?

Ans: _____

30. The line graph shows the number of visitors at Sentosa over a period of six months. Study the graph carefully and answer the questions below.



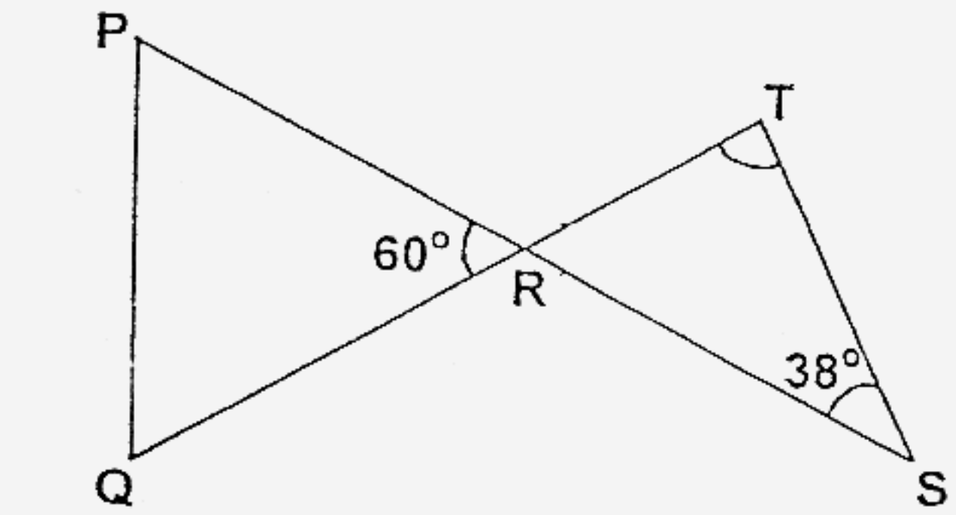
a) Which month had $\frac{1}{3}$ as many visitors as in June?

b) How many visitors were there in March?

Ans: a) _____

b) _____

31. In the figure below, not drawn to scale, PRS and QRT are straight lines.
What is the value of ∠ RTS?



Ans: _____ °

32. Mrs Goh had $1200. She gave the money to her three daughters from the youngest to the oldest in the ratio of 4 : 5 : 11 respectively.

How much **more** money did the oldest daughter receive than the youngest daughter?

Ans: $ _____

33. The postage charges for parcels are shown in the table below.
What is the cost of sending a parcel weighing 37 kg?

First 20 kg	$ 2.20 per kg
Next 20 kg	$ 1.00 per kg
Above 40 kg	$ 0.80 per kg

Ans: $ _____ .

34. Claire's monthly salary was $1700. She saved 25% of her salary every month.
How much did she spend in one year?

Ans: $ _____

35. A rope is 209.6 cm long. It is cut into 4 equal parts. Find the length of each part. Express your answer in metres.

Ans: _____ m

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.
(50 marks)

36. Paul spent $\frac{1}{6}$ of his money on bills and $\frac{3}{8}$ of it on food. He gave $450 to his mother and had $\frac{1}{4}$ of his money left. How much was his salary?

Answer: _____ [3]

37. Box B contained $\frac{1}{2}$ as many buttons as Box A. Box C contained $\frac{2}{3}$ as many buttons as Box B. The average number of buttons per box was 99. How many buttons were there in Box C?

Answer: _____ [3]

38. 2 pears cost as much as 3 apples. If the total cost of 2 pears and 3 apples is $2, what is the cost of 12 apples?

Answer: _____ [3]

39. The table below shows the rates of charges for taxi fare by a local taxi company.

Booking Fee	$3.00
First km	$2.50
Every additional 100 m or part thereof	$0.10

Mrs Rajah made a booking for a taxi from her hotel to the airport. If the distance travelled is 21.5 km, how much did she have to pay?

Answer: _____ [3]

40. Amy had $214 more than her brother. After their father gave Amy $85 and her brother $66, Amy had twice as much money as her brother. How much did Amy have at first?

Answer: _____ [3]

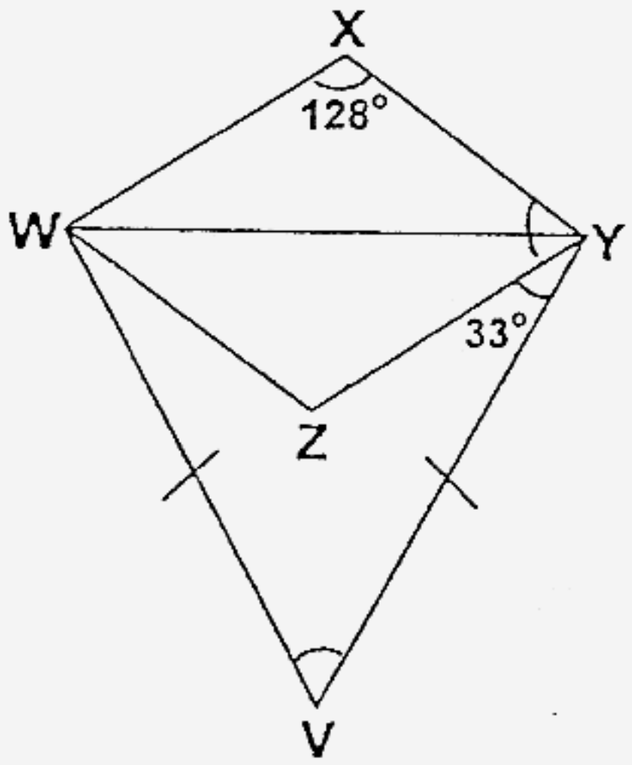
41. There were 825 people in the library. 40% of them were adults. The rest were children. Among the children, the ratio of the number of girls to the number of boys was 3 : 2. How many <u>more</u> adults than boys were there?

Answer: _____ [4]

42. Ali's height is $\frac{4}{5}$ of Bala's height. Bala is $\frac{11}{12}$ of Chandra's height. Chandra's height is $1\frac{4}{5}$ m. What is the difference between Ali's height and Bala's height? (Give your answer in centimetres.)

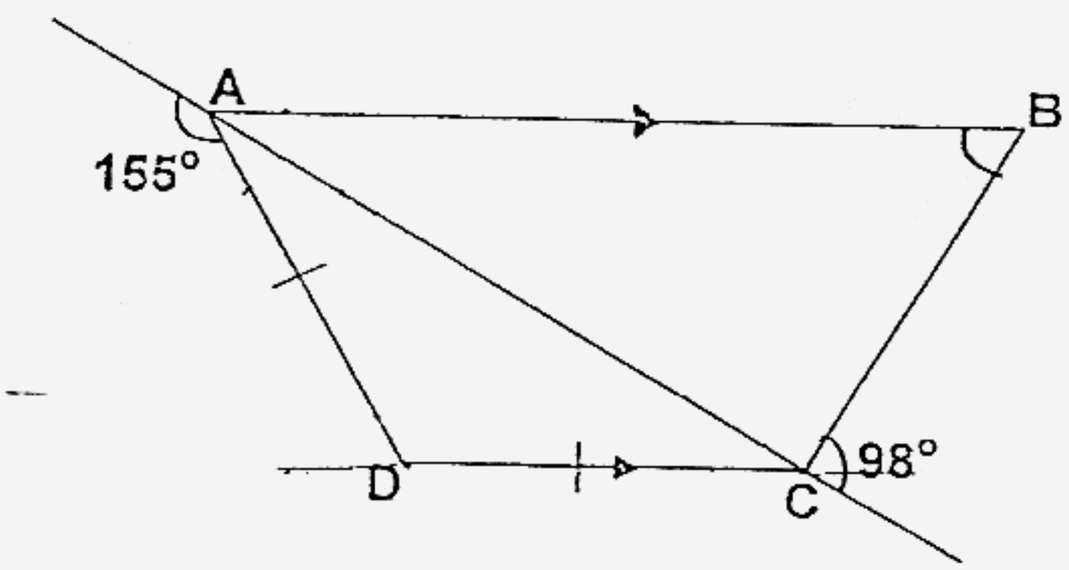
Ans: _____ [4]

43. WXYZ is a rhombus. If VW = VY, find ∠WVY.



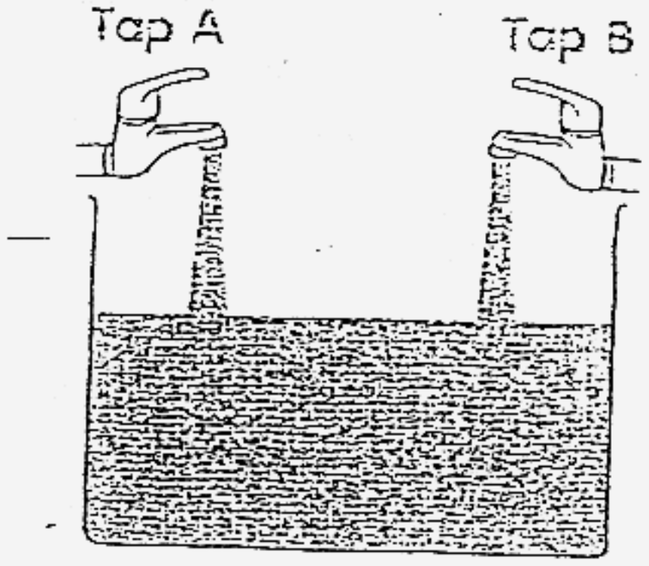
Ans: _____ [4]

44. The figure below is not drawn to scale. AB // DC and AD = CD.
AC is a straight line. Find ∠ ABC.



Ans: _____ [4]

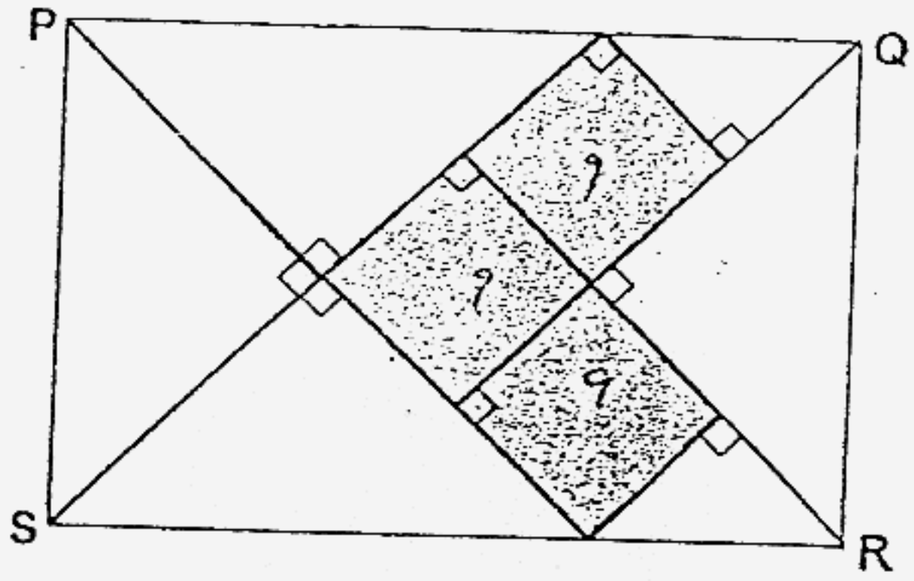
45. A water tank of capacity 93.6 *l* is being filled by 2 taps. Water flows from Tap A at the rate of 540 ml per minute. Water flows from Tap B at the rate of 500 ml per minute. If both taps are turned on at the same time, how long does it take to fill the water tank completely? Give your answer in hours and minutes.



Ans: _____ [4]

46. A rectangle is made up of right-angled isosceles triangles and 3 identical squares as shown. If the area of each square is 9 cm^2,

a) find the perimeter of the shaded part.
b) find the area of the rectangle PQRS.

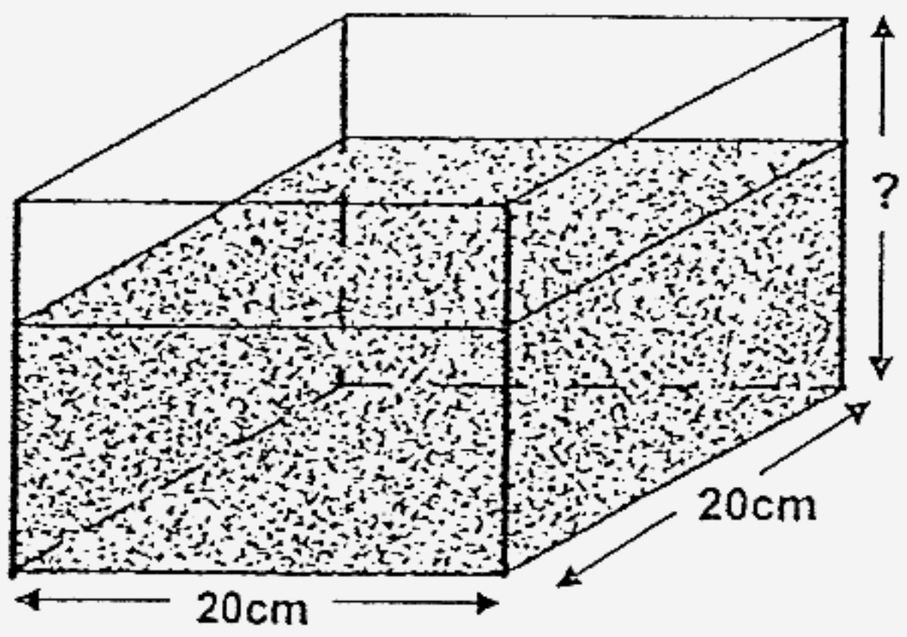


Ans: (a) _____ [1]

(b) _____ [4]

47. A tank with a square base of side 20 cm is $\frac{1}{4}$ filled with sand. When another 3 000 cm^3 of sand is poured into the tank, it becomes $\frac{2}{3}$ full.

a) Find the capacity of the tank.
b) Find the height of the tank. Give your answer in centimetres.



Ans: (a) _____ [3]

(b) _____ [2]

48. Lisa had a total collection of 160 stamps. 45% of them were local stamps. After giving away some of the foreign stamps to her friend, the number of local stamps left made up 60% of the remaining stamp collection. How many foreign stamps did Lisa give away?

Answer: _____ [5]

☺ ***End of Paper*** ☺
Please check your answers.

Methodist Girls Primary School

Answer Sheets

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

16. 50 500

17. 10 000

18. $\frac{4}{7}$ x 280 = 160 muffins

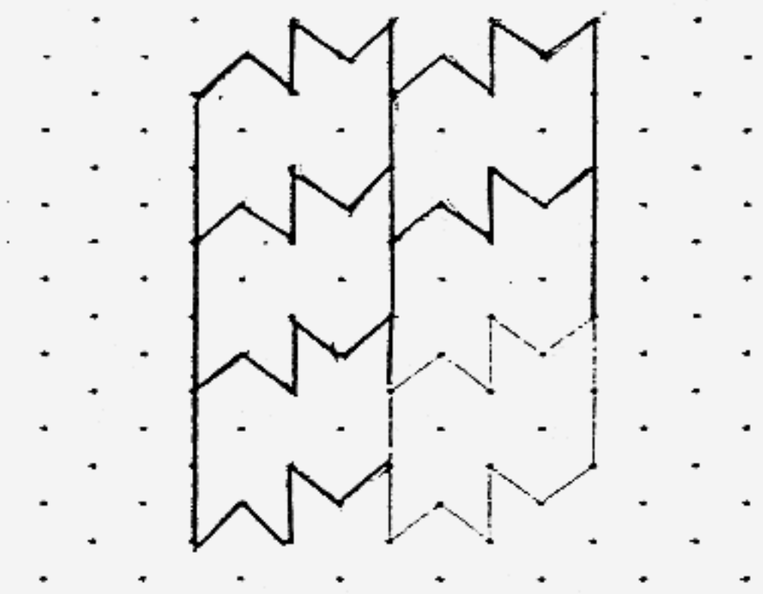
19. 3 : 1
1 unit = 126
4 units = 126 x 4 = 504 pupils

20. 2 years = 24 months
24 : 32 = 3 : 4

21. 40% = 20 marbles
25% = 50%

22. South – West

23.



24. 10.01 x 42 = 420.42

25. 64.16 ÷ 8 = 8.02

26. Alex = 55kg
Brian = 55 + 10 = 65kg
(158 – 55 – 65)kg = 38kg

27. Blouse = \$26.30
Skirt = \$(26.30 + 12.50)
= \$ 38.80
= \$(26.30 + 38.80)
= \$65.10

28. $\frac{1 \times 3}{3 \times 3}$ $\frac{3}{9}$ (Jen) = $\frac{3}{5}$ (Lena)
(9 – 5) = 4
4u = \$152
9u = \$342.00

29. 38 x 42 = 1596

$\frac{1}{3}$ x 1596 = 532 seats

30a. May
30b. 27000

31 $\angle RTS = 180° - 60° - 38° = 82°$

32. 4 : 5 : 11
20u = \$1200
1u = \$60
11u = \$660
4u = \$240
\$(660 – 240) = \$420

33. (37 - 20)kg = 17kg
20kg x \$2.20 = \$44.00
17kg x \$1.00 = \$17.00
\$(44 + 17) = \$61

34. 100% = \$1700
75% = \$1275 x 12
= \$15 300

35. 209.6 ÷ 100 = 2.096
= 2.096 ÷ 4
= 0.524

36. $\frac{3}{8} - \frac{1}{6} = \frac{18-10}{48} = \frac{8}{48}$ (Spend on Bills + Food)

$\frac{1}{4} = \frac{12}{48}$

$\frac{48}{48} - (\frac{12}{48} + \frac{8}{48} + \frac{18}{48}) = \frac{10}{48}$

10units = \$450
48units = \$2160.00

His salary is **\$2160**

37. C : B : A
1 : 2
2 : 3
2 : 3 : 6

99 x 3 = 297
11u = 297
2u = 54

Bix C has **54 buttons**

38. 2 pears = 3 apples
2 pears + 3 apples = $2.00
6apples = $2
12 apples = $2.x 2
= $4

12 apples costs **$4.00**

39. 21.5km – 1km = 20.5km ($2.50)
20.5km = 20500m
20500 ÷ 100 = 205
205 x 10¢ = 2050¢
= $20.50
$20.50 + $2.50 = $23.00
$23.00 + $3.00 = $26.00

She has to pay **$26.00**

40. $85 – $66 = $19
1u = $214 + $19
= $233
2u = $233 x 2
= $466
$(466 – 19 – 66) = $381.00

Amy has **$381** at first.

41. 100% = 825 people
60% = 495 children
40% = 330 adult
5u = 495
2u = 198
(330 – 198) = 132

There are **132 more adults** than boys

42. A : B : C
4 : 5
44 : 55 : 60

$60u = 1\frac{4}{5}m$
= 180cm
11u = 33cm

The different is **33cm**

43. $(180° - 128°) \div 2 = 26°$
$\angle WYV = 26° + 33° = 59°$
$\angle WVY = 180° - (59° \times 2)$
$= 180° - 118°$
$= 62°$

$\angle WVY$ is **62°**

44. $\angle CAD = 180° - 155° = 25°$
$180° - 98° = 62°$
$82° + 25° = 107°$
$180° - 107° = 73°$

$\angle ABC$ is **73°**

45. Tap A | Tap B

1 min = 540mℓ | 1 min = 500mℓ

1 min = 540 + 400 = 1040mℓ

93.6ℓ = 93600mℓ

93600 ÷ 1040 = 90mins

= 1 hr 30 mins

It takes **1 hr 30 mins** to fill the tank completely.

46a. $9cm^2 = 3 \times 3$

$3 + 3 = 6cm$

$(6 + 3 + 3 + 3 + 3 + 6) = 24cm$

The shaded part is **24cm**

46b. $(\frac{1}{2} \times 6 \times 6) \times 4 = 72cm$

$(\frac{1}{2} \times 3 \times 3) \times 2 = 9cm^2$

$72 + 9 + 9 + 9 + 9 = 108cm^2$

The area of the rectangle PQRS is **108cm²**

47a. $\frac{2}{3} - \frac{1}{4} = \frac{8-3}{12} = \frac{5}{12}$

$5u = 3000cm^3$

$12u = 7200cm^3$

The capacity of the tank is $72000cm^3$

47b. $7200 \div (20 \times 20)$

$7200 \div 400 = 18cm$

The height of the tank is **18cm**

48. 100% = 160 stamps
45% = 72 stamps

55% = 88 stamps
60% = 72 stamps
40% = 48 stamps
(88 – 48) = 40stamps

Lisa gave away **40 foreign stamps**.