METHODIST GIRLS' SCHOOL

Founded in 1887

PRIMARY 5 END-OF-YEAR EXAMINATION 2010
MATHEMATICS
PAPER 1

(BOOKLET A)

Total Time for Booklets A and B: 50 minutes

INSTRUCTIONS TO CANDIDATES

Do not turn over this page until you are told to do so.
Follow all instructions carefully.
Answer all questions.
Shade your answers in the Optical Answer Sheet (OAS) provided.
The use of calculators is **NOT** allowed.

Name: _____( )

Class: Primary 5._____

Date: 7 October 2010

This booklet consists of 6 printed pages including this page.

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)

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1. What is the value of $60 \div 2 \times (64 - 49)$?

   (1) 20
   (2) 2
   (3) 45
   (4) 450

2. Round off 563 982 to the nearest ten thousands.

   (1) 560 000
   (2) 563 000
   (3) 564 000
   (4) 570 000

3. On a bus, $\frac{3}{7}$ of the passengers are women. $\frac{1}{2}$ of the remainder are men and the rest are children. What fraction of the passengers on the bus are children?

   (1) $\frac{1}{14}$
   (2) $\frac{2}{7}$
   (3) $\frac{1}{2}$
   (4) $\frac{4}{7}$

4. What is the missing number in the box $1\frac{5}{9} = \frac{\square}{27}$?

   (1) 14
   (2) 15
   (3) 42
   (4) 45

(Go on to the next page)

5. There are _____ thousandths in $\frac{1}{5}$.

(1) 20
(2) 50
(3) 200
(4) 500

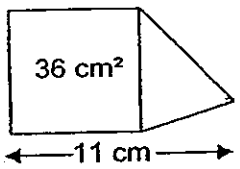
6. The average length of each step that John takes is 80 cm. How many steps must John take to reach the end of the room which is 6.5 m from where he is standing?

(1) 8
(2) 9
(3) 12
(4) 13

7. Clara is 11 years old. Her mother is 39 years old. What is the total age of Clara and her mother in 7 years' time?

(1) 36
(2) 43
(3) 57
(4) 64

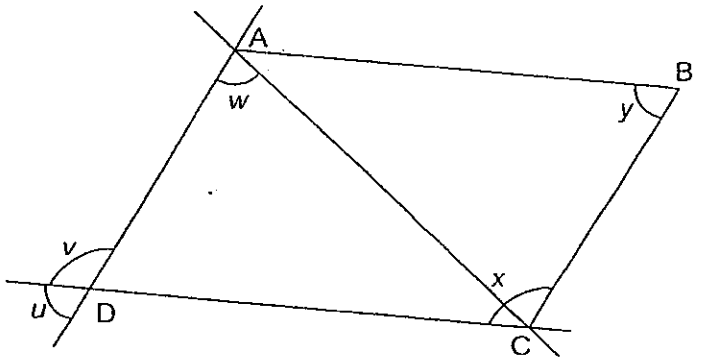
8. The figure below is made up of a triangle and a square with an area of 36 cm². Find the area of the triangle.



(1) 15 cm²
(2) 18 cm²
(3) 30 cm²
(4) 33 cm²

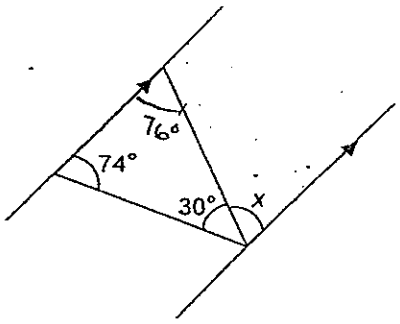
(Go on to the next page)

9. ABCD is a parallelogram. Which angle has the **same value** as $\angle y$?



(1) $\angle u$
(2) $\angle v$
(3) $\angle w$
(4) $\angle x$

10. In the figure not drawn to scale, find $\angle x$.



(1) 44°
(2) 60°
(3) 75°
(4) 76°

(Go on to the next page)

11. There are 560 eggs in a basket. $\frac{1}{2}$ of the brown eggs is equal to $\frac{3}{8}$ of the white eggs. How many brown eggs are there in the basket?

(1) 120
(2) 240
(3) 280
(4) 320

12. Given that X : Y is 4 : 5 and Y : Z is 2 : 7.
When X increased by 25%, what is X : Z?

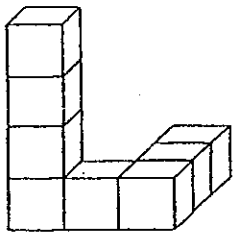
(1) 2 : 7
(2) 4 : 7
(3) 5 : 4
(4) 8 : 35

13. A factory employs 400 workers. $\frac{2}{5}$ of them walk to work, 25% of them take the public transport and the rest cycle. How many workers cycle to work?

(1) 300
(2) 240
(3) 180
(4) 140

(Go on to the next page)

14. The figure below shows an incomplete cube.
How many more cubes are needed to complete the solid?



(1) 56
(2) 36
(3) 28
(4) 19

15. Jane scored an average of 82 marks for English and Mathematics and an average of 85 marks for Science and Mathematics in the mid-year examinations. What was her Science mark if she scored an average mark of 89 for all 3 subjects?

(1) 87
(2) 89
(3) 93
(4) 97

End of Booklet A

METHODIST GIRLS' SCHOOL

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PRIMARY 5 END-OF-YEAR EXAMINATION 2010
MATHEMATICS

PAPER 1

(BOOKLET B)

Total Time for Booklets A and B: 50 minutes

INSTRUCTIONS TO CANDIDATES

Do not turn over this page until you are told to do so.
Follow all instructions carefully.
Answer all questions.
Write your answers in this booklet.
The use of calculators is **NOT** allowed.

Name: _____ ( )

Class: Primary 5._____

Date: 7 October 2010

Paper 1 Booklet A	**/ 20**
Paper 1 Booklet B	**/ 20**
Paper 2	**/ 60**
TOTAL	**/ 100**

This booklet consists of 7 printed pages including this page.

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 missing number in the box?

$4956 \times 183 = 5100 \times 183 - \square \times 183$

Ans: _____

17. Write 56 ten thousands and 92 hundreds as a numeral.

Ans: _____

18. Arrange the following fractions in descending order.

$$\frac{1}{6}, \frac{2}{3}, \frac{3}{4}, \frac{5}{12}$$

Ans: _____

(Go on to the next page)

19. What is the missing number in the box?

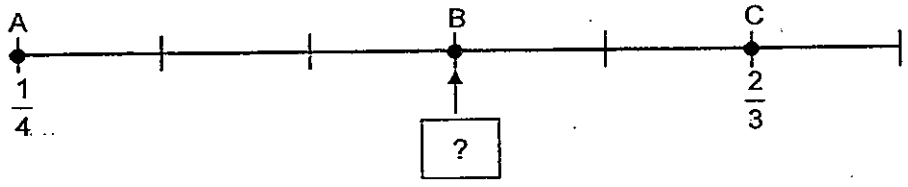
$\frac{2}{7} \times \square = 14.$

Ans: _____

20. Jane had 12 kg of flour. She used up $\frac{2}{5}$ of it to bake some cookies. How much flour did she have left?

Ans: _____ kg

21. In the number line below, A represents $\frac{1}{4}$ and C represents $\frac{2}{3}$. What decimal is represented by B?



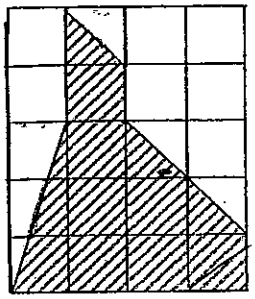
Ans: _____

(Go on to the next page)

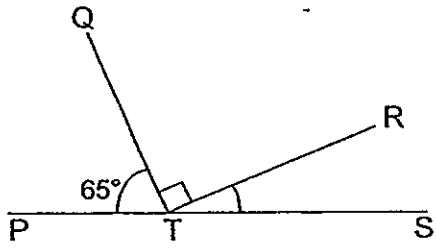
22. Amanda is 14 years old. Her brother is 12 years older. What is their average age?

Ans: _____ yr

23. Shade the figure so that 60% of the grid is shaded.



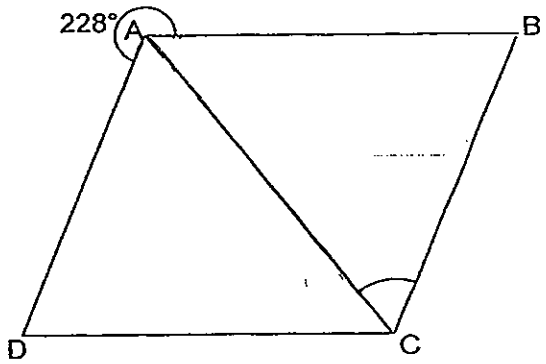
24. The figure below is not drawn to scale. PTS is a straight line and $\angle PTQ = 65°$. Find $\angle RTS$.



Ans: _____ °

(Go on to the next page)

25. The figure below is not drawn to scale.
ABCD is a rhombus. Find $\angle$ BCA.



Ans: _____°

(Go on to the next page)

Questions **26** to **30** 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.

(10 marks)

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26. Jerry had some beads. He can divide them equally into 2, 5 or 7 groups. What was the maximum number of beads that he had if he had less than 250 beads?

Ans: _____

27. A ribbon is cut into three pieces in the ratio 3 : 2 : 4. The difference in length between the longest and shortest piece is 0.72 m. What is the length of the ribbon?

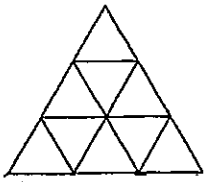
Ans: _____ m _____ cm

28. The usual price of a digital camera was $250. The shopkeeper gave Samy a 20% discount. How much did Samy pay for the digital camera if he had to pay an additional 7% GST?

Ans: $_____

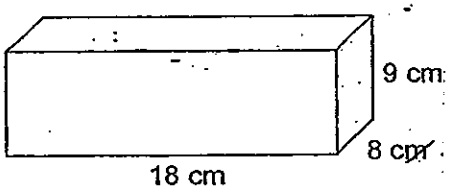
(Go on to the next page)

29. The figure below has a perimeter of 36 cm. It is made up of 9 identical triangles. What is the **increase** in the perimeter of the figure when a row of triangles is added to the base?



Ans: _____ cm

30. How many cubes with an edge of 2 cm can be placed in the box as shown below?



Ans: _____

End of Booklet B

METHODIST GIRLS' SCHOOL
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PRIMARY 5 END-OF-YEAR EXAMINATION 2010
MATHEMATICS

PAPER 2

Duration: 1 h 40 min

INSTRUCTIONS TO CANDIDATES

Do not turn over this page until you are told to do so.
Follow all instructions carefully.
Answer all questions.
Write your answers in this booklet.
The use of an approved calculator is expected, where appropriate.

Name: _____( )

Class: Primary 5._____

Date: 7 October 2010

60

This booklet consists of 14 printed pages including this page.

Questions 1 to 5 carry 2 marks each. Show your working clearly and write your answers in the spaces provided. For questions which require units, give your answers in the units stated.

(10 marks)

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1. Norman is 18 years old now. His father is 30 years older than him. In how many years' time will Norman be $\frac{3}{5}$ as old as his father?

Ans: _____

2. A jug can fill 4 glasses or 10 cups completely with water. Each glass can hold 300 mℓ of water. How much water is needed to fill 6 cups?

Ans: _____ mℓ

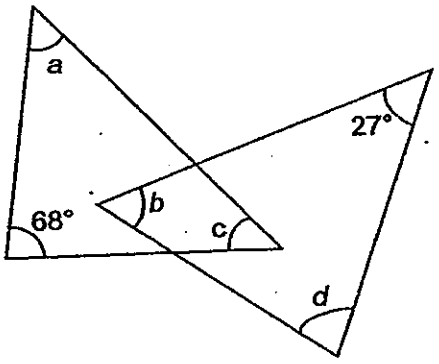
(Go on to the next page)

3. The table shows the activities enjoyed by 150 residents in Greenvale Estate.
What percentage of the residents enjoy singing?

Hobbies	Number
Dancing	25
Playing Golf	33
Qigong	17
Singing	?
Walking	45

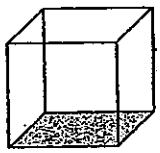
Ans: _____%

4. The figure below, not drawn to scale, is made up of 2 triangles.
Find the value of $\angle a + \angle b + \angle c + \angle d$.



Ans: _____°

5. The figure below shows a cuboid with a volume of 320 cm^3. Its height is 5 cm. Find the length of the square base.



Ans: _____cm

(Go on to the next page)

For questions **6** to **18**, show your working clearly 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. (50 marks)

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6. $\frac{1}{5}$ of a group of pupils like to play football, $\frac{1}{2}$ of the pupils like to play netball, $\frac{1}{6}$ of the pupils like to play basketball, and the rest like to read.

   (a) What fraction of the pupils likes to play ball games?
   (b) If 32 pupils like to read, how many pupils like to play football?

Ans: (a) _____ [1]

(b) _____ [2]

7. The ratio of John's age to Rachel's age is 7 : 3. Rachel is 16 years younger than John. In how many years' time will their average age be 37?

Ans: _____ [3]

(Go on to the next page)

8. Muffins are sold at Carol's Deli at the prices as shown below.

1 for $1.50
2 for $2.60
5 for $6.00

(a) What is the minimum amount Mrs Chong has to pay if she wants to buy 42 muffins?
(b) How much change will she receive if she gives the cashier 2 fifty-dollar notes?

Ans: (a) _____ [2]

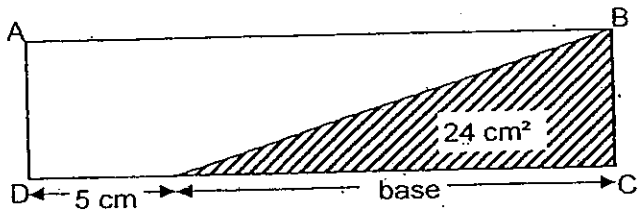
(b) _____ [1]

9. The sum of the last 3 pages of a book is a 3-digit number.
The digit in the hundreds place is five times the digit in the ones place.
The digit in the tens place is the second multiple of 3.
What is the last page number?

Ans: _____ [3]

(Go on to the next page)

10. In the figure below, the area of the shaded triangle is 24 cm^2.
The base of the triangle is 3 times its height.
Find the area of the rectangle ABCD.



Ans: _____ [3]

11. A factory employed 120 workers. The ratio of the number of female workers to the number of male workers was 3 : 5. When 5 female workers left, the factory hired male workers to replace those who had left. What fraction of the workers are males now?

Ans: _____ [3]

(Go on to the next page)

12. Pail A contained $\frac{7}{17}$ of the amount of water in Pail B.

Pail C contained $\frac{1}{9}$ of the total amount of water the three pails had.

If Pail A and Pail B contained 5.25 litres of water more than Pail C, how much water did Pail B contain? (Give your answer in litres.)

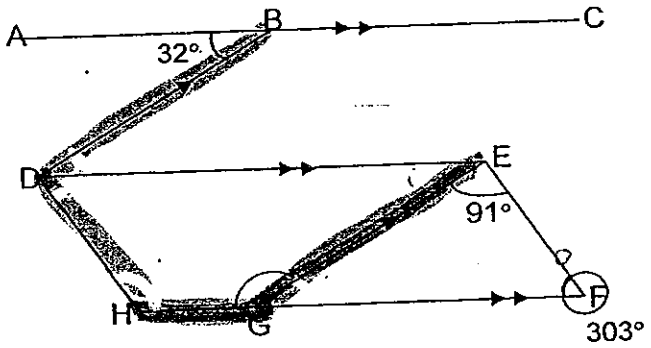
Ans: _____ [4]

(Go on to the next page)

13. The figure below is not drawn to scale. ~~ABCD~~ DEFH is a parallelogram. AC is parallel to DE and HF. DB is parallel to GE.

(a) Find ∠EGH.

(b) Find ∠BDH.

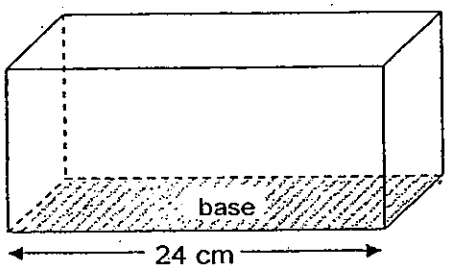


Ans: (a) _____[2]

(b) _____[2]

(Go on to the next page)

14. The volume of a gift box is 1 632 cm³. Its length is 24 cm. Its breadth is $\frac{1}{3}$ of its length.
(a) Find its height.
(b) What is the new volume when the length is increased by 10%?



Ans: (a) _____ [1]

(b) _____ [3]

(Go on to the next page)

15.

Figure 1

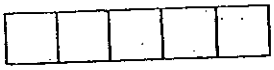


Figure 2

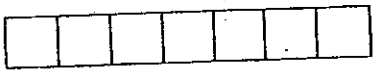


Figure 3

Figure	Number of squares	Number of sticks
1	3	10
2	5	16
3	7	22
4	(a)	28

(a) How many squares are there in Figure 4?
(b) Which figure has 52 sticks?
(c) How many sticks are needed to make 55 squares?

Ans: (a) _____ [1]

(b) _____ [2]

(c) _____ [2]

on to the next page)

16. Mrs Tan bought a total of 189 donuts and cupcakes. She gave $\frac{1}{2}$ of the donuts to Ally and $\frac{1}{3}$ of the cupcakes to Joseph. She then had 114 donuts and cupcakes left.

(a) How many donuts did Mrs Tan buy?

(b) If each donut cost \$0.80 and each cupcake cost \$1.80, how much did Mrs Tan pay for all the food?

Ans: (a) _____ [3]

(b) _____ [2]

(Go on to the next page)

17. There were 182 red, blue and green beads in the box.
26 green beads were removed from the box and the ratio of the number of red beads to the number of blue beads to the number of green beads became 4 : 3 : 5.
Then some yellow beads were added and the ratio of the number of green beads to the number of yellow beads was 13 : 9.

(a) What was the ratio of the number of red beads to the number of blue beads to the number of green beads at first?

(b) How many beads were in the box at the end?

Ans: (a) _____ [2]

(b) _____ [3]

(Go on to the next page)

18. Mrs Goh bought a blouse with 30% of her money. Then she bought a bag which cost $38 more than the blouse. She had $142 left.
    (a) How much money did Mrs Goh have at first?
    (b) What percentage of her money was spent on the bag?
    (Give your answer correct to 1 decimal place.)

Ans: (a) _____ [2]

(b) _____ [3]

End of Paper

Ans

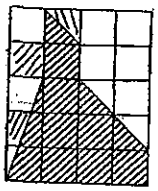
EXAM PAPER 2010

SCHOOL : MGS PRIMARY
SUBJECT : PRIMARY 5 MATHEMATICS

TERM : SA2

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

16)144 **17)569200** **18)¾, 2/3, 5/12, 1/6** **19)49** **20)7.2kg**

21)0.5 **22)20 yr** **23)**  **24)25°** **25)66°**

26)210 beads **27)3 m 24 cm** **28)$214** **29)12cm**

30)144 cubes

Paper 2

1)30 + 18 = 48 **48 – 18 = 30** **30 ÷ 2 = 15** **15 x 3 = 45** **45 – 18 = 27**	**2)300 x 4 = 1200** **1200 ÷ 10 = 120** **120 x 6 = 720ml**
3)150 – 25 – 33 = 92 **92 – 17 – 45 = 30** **30/150 x 100% = 20%**	**4)360° – 27° – 68° = 265°**
5)320 ÷ 5 = 64 **$\sqrt{64}$ = 8cm**	**6)a)1/5 + ½ + 1/6 =13/15 pupils** **b)1 – 13/15 = 2/5** **32 ÷ 2 = 16** **16 x 3 =48 pupils**
7)4u→16 **1u→4** **10u→40** **74 – 40 = 34** **34 ÷ 2 = 7 years**	**8)a)6 x 8 =48** **48 + 2.60 = $50.60** **b)50 – 0.60 = $49.40**

9)561 – 3 = 558 558 ÷ 3 = 186 186 + 2 = 188	10)24 x 2 = 48 12 x 4 =48 12 + 5 = 17 17 x 4 =68cm^2
11)120 ÷ 8 = 15 15 x 3 = 45 15 x 5 = 75 75 + 5 = 80 80/120 = 2/3	12)27 – 24 = 3 24 – 3 = 21 5250 ÷ 21 = 250 250 x 17 = 4250 4250ml = 4.25L
13)360 – 303 =57 91 + 57 = 148 180 – 148 = 32 180 – 32 = 148 ∠ EGH = 148° 32 + 57 = 89 ∠ BDH= 89° a)∠EGH is equal to 148° b)∠ BDH is equal to 89°	14)a)24 ÷ 3 = 8 1632 ÷ (24 x 8) = 8.5 b)8 x 10/100 = 0.8 8.8 x 24 x 8.5 = 1795.2 a)The height is 8.5cm b)The new volume is 1795.2cm^3
15)a)3 + 2 x 3 = 9 There are 9 squares. b)52 – 10 = 42 42 ÷ 6 = 7 7 + 1 = 8 Figure 8 has 52 sticks. c)55 x 3 + 1 = 166 166 sticks are needed	16)a)½ of D + 1/3 of C→189 - 114 =75 ½ of D + 2/3 of C→114 1/3 of C→114 – 75 = 39 C→39 x 3 = 117 ½ of D→75 – 39 = 36 D→36 x 2 = 72 189 – 117 = 72 She bought 72 donuts. b)$0.80 x 72 + $1.80 x 117 =$268.20 She paid $268.20
17)a)The ratio is 4:3:7 b)201 beads	18)a)142 + 38 = 180 180 ÷ 40 = 4.50 4.50 x 100 = 450 She had $450 at first b)30/100 x 450 = 135 135 = 38 = 173 173/450 x 100% ≈ 38.4% The percentage is 38.4%