METHODIST GIRLS' SCHOOL

Founded in 1887

MID-YEAR EXAMINATION 2014
PRIMARY 6

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 6._____

Date: 15 May 2014

This booklet consists of 7 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 correct oval (1, 2, 3 or 4) on the Optical Answer Sheet.

(20 marks)

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1. In 2 860 354, which digit is in the ten thousands place?

   (1) 8
   (2) 6
   (3) 3
   (4) 0

2. Mrs Rama baked 140 muffins. She packed the muffins into boxes of 6. How many muffins were left over?

   (1) 1
   (2) 2
   (3) 3
   (4) 4

3. Round off 6.826 to 2 decimal places.

   (1) 6.80
   (2) 6.82
   (3) 6.83
   (4) 6.90

(Go on to the next page)

4. Find the value of 0.47 x 60.

(1) 2.82
(2) 3.22
(3) 28.2
(4) 32.2

5. What is the value of $11 + \frac{4y}{2}$ when $y = 6$?

(1) 12
(2) 16
(3) 23
(4) 34

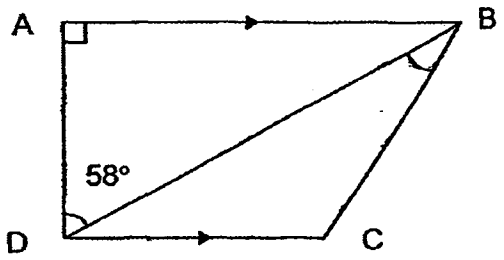
6. There are 45 tarts in a box. 27 of them are egg tarts while the rest are fruit tarts. What is the ratio of the number of egg tarts to the number of fruit tarts in the box?

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

7. 25% of a number is 60. What is $\frac{1}{6}$ of the number?

(1) 15
(2) 25
(3) 40
(4) 45

8. In the figure below, ABCD is a trapezium.
AB // DC, DC = CB, ∠DAB = 90° and ∠ADB = 58°.
Find ∠CBD.

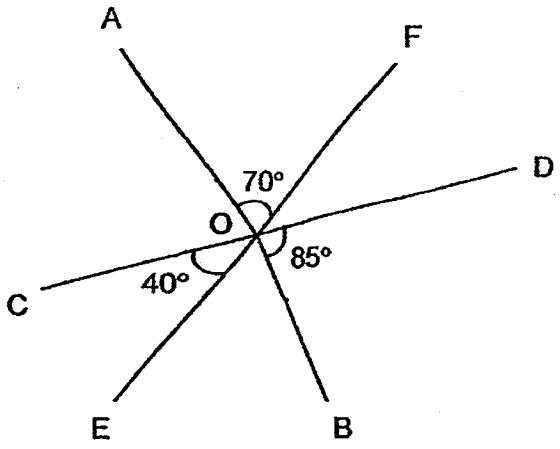


(1) 29°
(2) 32°
(3) 58°
(4) 64°

(Go on to the next page)

9. In the figure below, COD and EOF are straight lines.

Find the sum of ∠EOB and ∠AOC.



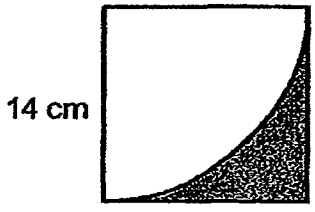
(1) 125°

(2) 140°

(3) 155°

(4) 165°

10. The figure below shows a square and a quadrant. Find the perimeter of the shaded part. (Take $\pi = \frac{22}{7}$)



(1) 22 cm

(2) 36 cm

(3) 50 cm

(4) 56 cm

(Go on to the next page)

11. The pupils in a class are grouped equally into Team A and Team B. The ratio of the number of boys to the number of girls in Team A is 2 : 1 and the ratio of the number of boys to the number of girls in Team B it is 4 : 11. What is the ratio of the number of boys to the number of girls at the class?

(1) 1 : 2
(2) 7 : 8
(3) 8 : 11
(4) 8 : 13

12. Thelma has $120. This is 20% of the amount of money that Lily has. How much money does Lily have?

(1) $100
(2) $120
(3) $150
(4) $600

13. Which one of the following fractions is nearest to 1?

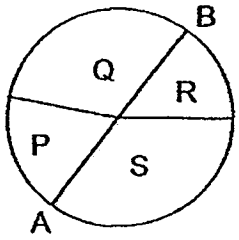
(1) $\frac{6}{7}$
(2) $\frac{7}{6}$
(3) $\frac{8}{9}$
(4) $\frac{9}{8}$

(Go on to the next page)

14. Mr Tan drove for $1\frac{1}{2}$ h at a speed of 80 km/h. He then drove for another $\frac{1}{2}$ h at a speed of 100 km/h. Find Mr Tan's average speed for the whole journey.

(1) 45 km/h
(2) 70 km/h
(3) 85 km/h
(4) 90 km/h

15. The figure below shows a circle that is divided into 4 parts P, Q, R and S. The line AB is the diameter of the circle. The ratio of Area P to Area Q is 1 : 2 and the ratio of Area R to Area S is 1 : 3. Find the ratio of Area Q to Area S.



(1) 2 : 3
(2) 3 : 2
(3) 8 : 9
(4) 4 : 3

METHODIST GIRLS' SCHOOL

Founded in 1887

MID-YEAR EXAMINATION 2014
PRIMARY 6

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 6._____

Date: 15 May 2014

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

This booklet consists of 8 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)**

Do not wr in this spa

16 What is the missing number in the box?

$35 \times 21 = 16 \times 35 + \square \times 35$

Ans: _____

17 Find the value of $50 - 18 \div 3 \times (4 + 3)$.

Ans: _____

18 Express 0.085 as a percentage.

Ans: _____ %

(Go on to the next page)

19 In a basket, $\frac{1}{6}$ of the fruits are apples and the rest are oranges.

$\frac{3}{10}$ of the apples are red. There are 15 red apples.

How many fruits are there in the basket?

Do not write in this space

Ans: _____

20 Mary sold $(3k + 2)$ flowers on Friday. She sold k more flowers on Saturday than on Friday. How many flowers did she sell altogether? Give your answer in terms of k in the simplest form

Ans: _____

(Go on to the next page)

21 The price of an eraser is $\frac{3}{5}$ the price of a pen. The price of a ruler is half the price of an eraser. What is the ratio of the price of the pen to the price of an eraser to the price of a ruler?

Do not write in this space

Ans: _____

22 The ratio of Mary's savings to Charlotte's savings is 5 : 8. Mary has $360 less than Charlotte. What is the total amount of their savings?

Ans: $ _____

23 Jon walked from his house to the library which was 0.2 km away. His walking speed was 20 m/min. How long did Jon take to walk to the library?

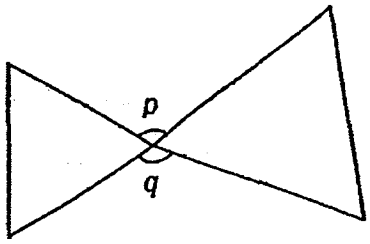
Ans: _____ min

(Go on to the next page)

Do not write in this spac

24 The figure below shows 2 equilateral triangles.

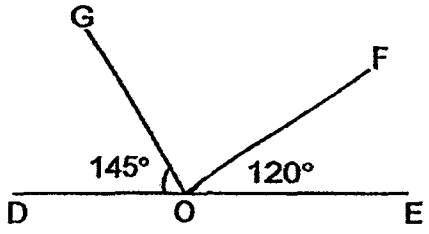
Find the sum of $\angle p$ and $\angle q$.



Ans: _____ °

25 In the figure below, DOE is a straight line.

$\angle DOF = 145°$ and $\angle EOG = 120°$. Find $\angle GOF$.



Ans: _____ °

(Go on to the next page)

Questions **26** to **30** 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)

Do not in this s

26 Every time Jane saved \$4.50 in her piggy bank, her mother would give her another 50 cents. When Jane had \$100 in her savings, how much of it was given by her mother?

Ans: \$ _____

27 There are red, blue and yellow buttons in a box.
The ratio of the number of red buttons to blue buttons is 4:5.
The ratio of the number of yellow buttons to the total number red and blue buttons is 5:6. What fraction of the buttons in the box are blue buttons?

Ans: _____

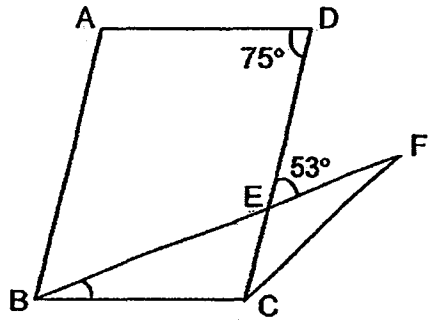
(Go on to the next page)

28 Miss Lee bought some pineapple tarts. She gave 30% of the pineapple tarts to her neighbour and ate 40% of the remaining tarts. If she had 84 pineapple tarts left, how many pineapple tarts did she buy?

Do not write in this space

Ans: _____

29 In the figure below, ABCD is a parallelogram and BCF is an isosceles triangle with BC = CF. BEF is a straight line, ∠ADC = 75° and ∠DEF = 53°. Find ∠CBF.



Ans: _____°

(Go on to the next page)

30 Ahmad took 45 minutes to drive from Town A to Town B at an average speed of 80 km/h. After that he took $2\frac{1}{4}$ hours to travel 135 km from Town B to Town C. Find Ahmad's average speed for the whole journey.

Do not v
in this s

Ans: _____ km/h

END OF PAPER

METHODIST GIRLS' SCHOOL

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MID-YEAR EXAMINATION 2014
PRIMARY 6

MATHEMATICS

PAPER 2

Total Time: 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 6._____

Date: 15 May 2014

60

This booklet consists of 15 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)

Do not in this

1 Sarah had \$500 and Chloe had \$900. After both of them spent an equal amount of money, Sarah had $\frac{1}{5}$ as much as Chloe.

How much did Chloe spend?

Ans: \$ _____

2 Mr Chong bought a television set at \$1 950 after a 35% discount.

What was the original price of the television set?

Ans: \$ _____

(Go on to the next page)

3 Ahmad took 45 minutes to cycle $11\frac{1}{4}$ km. Find Ahmad's average cycling speed in km/h.

Do not write in this space

Ans: _____ km/h

4 A table with 4 columns is filled with numbers in a certain pattern.
The first 4 rows of the table are shown below.

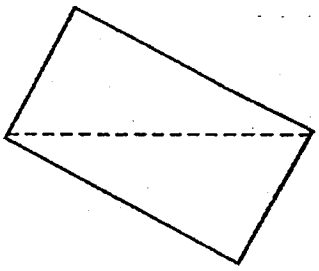
	Column A	Column B	Column C	Column D
Row 1	1	2	3	4
Row 2	8	7	6	5
Row 3	9	10	11	12
Row 4	16	15	14	13
:	:	:	:	:

What is the number in Row 12, Column B?

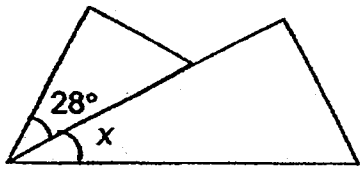
Ans: _____

(Go on to the next page)

5 John folded a piece of rectangular paper along the dotted line as shown below. Find $\angle x$.



Before folding



After folding

Ans: _____ °

(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)

Do not write in this spac

6 Stella bought some red, yellow and white bows.

The ratio of the number of red bows to the number of yellow bows was 4:1.

The ratio of the number of red bows to the number of white bows was 5:2.

If there were 165 more red bows than yellow bows, how many yellow bows did Stella buy?

Ans: _____ [3]

7 Last year, there were 120 pupils in the computer club. 40% of the pupils were boys. Some boys joined the computer club this year. The percentage of the pupils who ~~were~~ are boys has increased to 52%. How many boys joined the computer club this year?

Ans: _____ [3]

(Go on to the next page)

8 The original selling price of a computer was $2800. A shop sold it at a discount of 20% during a sale. If the shop charged 7% Goods and Services Tax (GST) on the discounted price, how much was the GST?

Do no in this

Ans: _____ [3]

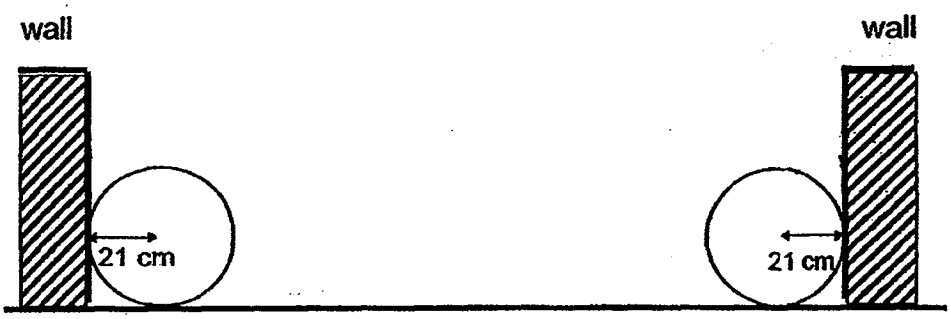
9 In a basket, there were balls of three different sizes: large, medium and small. $\frac{2}{3}$ of the balls were large, $\frac{1}{5}$ of the balls were medium and the rest were small. There were 128 more large balls than small balls.
How many small balls were there?

Ans: _____ [3]

(Go on to the next page)

10 John rolled a hula hoop from one end of the room to the other end of the room. He counted that he could make 5 complete revolutions before the hula hoop touched the wall on the other end. The radius of the hula hoop is 21 cm. Find the distance between the 2 walls of the room. (Take $\pi = \frac{22}{7}$)

Do not write in this space

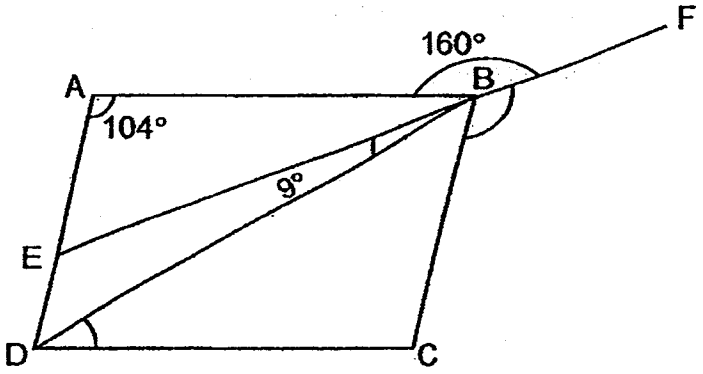


Ans: _____ [3]

11 In the figure, ABCD is a parallelogram. EBF is a straight line, $\angle DAB = 104°$, $\angle ABF = 160°$ and $\angle DBE = 9°$.

(a) Find $\angle CBF$.

(b) Find $\angle CDB$.



Ans: (a) _____ [2]

(b) _____ [2]

Do not v
in this s

(Go on to the next page)

12 Mrs Tan baked 185 more chocolate cupcakes than lemon cupcakes.

After selling $\frac{3}{5}$ of the chocolate cupcakes and $\frac{1}{2}$ of the lemon cupcakes, he had 146 cupcakes left. How many cupcakes did she sell?

Do not write in this space

Ans: _____ [4]

(Go on to the next page)

13 Four men carried $2r$ sacks of rice each.

The 5th man carried 6 more sacks of rice than each of the four men.

(a) Find the number of sacks of rice the 5 men carried altogether. Give your answer in terms of r.

(b) The 5th man carried 14 sacks of rice, find the number of sacks of rice the 5 men carried altogether.

Do not in this

Ans: (a) _____ [2]

(b) _____ [2]

(Go on to the next page)

14 Joe and Muthu took part in a 5 km race. Both of them did not change their speeds throughout the race. Muthu ran at a speed of 200 m/min. When Muthu reached the finishing line, Joe was 750 m behind him. What was Joe's speed in km/h?

Do not write in this space

Ans: _____ [4]

(Go on to the next page)

15 Sally had $\frac{3}{4}$ as much money as Zoey. Sally and Zoey shared the cost of a present in the ratio 2 : 3 respectively. Sally used 50% of her money to pay for her share. Zoey had $84 left after paying for her share.

(a) How much did Sally pay for the present?

(b) What is the cost of the present?

Do no in this

Ans: (a) _____ [3]

(b) _____ [2]

(Go on to the next page)

16 Charles and Lily had some stickers. $\frac{1}{3}$ of Charles' stickers was 160 more than 120% of Lily's stickers. They had a total of 2550 stickers.

How many stickers did Charles have?

Do not writ
in this spac

Ans: _____ [4]

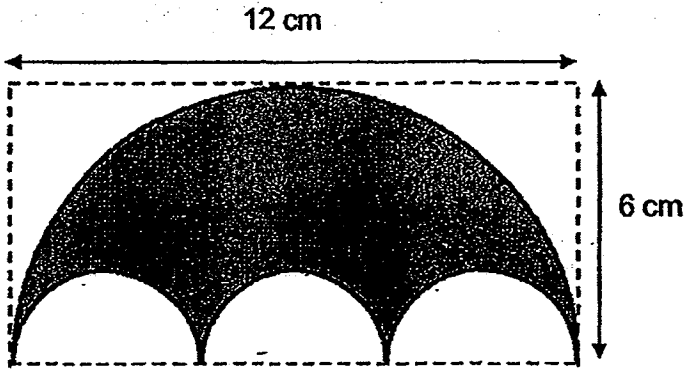
(Go on to the next page)

17 The following figure is cut out from a rectangular piece of cardboard measuring 12 cm by 6 cm. It is made up of a large semicircle and 3 smaller semicircles.

(a) Find the perimeter of the shaded part.

(b) Find the area of the shaded part.

(Take $\pi = 3.14$)



Do not v
in this s

Ans: (a) _____ [2]

(b) _____ [3]

(Go on to the next page)

18 Janice and Marissa had some money.

If Janice spends $40 per day and Marissa spends $80 per day, Marissa would have $500 left by the time Janice spends all her money.

If Janice spends $80 per day and Marissa spends $40 per day, Marissa would have $1100 left by the time Janice spends all her money.

Find the total amount of money Marissa and Janice had at first.

Do not w
in this s

Ans: _____ [5]

END OF PAPER

Answer Ke

EXAM PAPER 2014
SCHOOL : MGS
SUBJECT : PRIMARY 6 MATHEMATICS

TERM : SA1

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

16)202.2 **17)0.7 kg** **18)2.73** **19)208%** **20)2/9**

21)6 cm^2 **22)21** **23)1743000** **24)24°** **25)250°**

26)70 % **27)96** **28)$\frac{(100y+5)}{2}$ cm** **29)3 : 2** **30)40°**

Paper 2

1)$30 – $9 – $4y
=$21 – $4y
= $(21 – 4y)

2)1u→5
4u→5 x 4 = 20

3)shaded area→(½ x 28 x 12)cm^2 = 168cm^2

4)∠CBE→180° – 27° – 90° = 63°
∠DAB→180° – 63° – 94° = 23°

5)(180° – 36°) x 2 = 288°

6)15 : 4 : 5

7)4 x p + 8 = 4p + 8
6 x p – 68 = 6p – 68
4p + 8 = 6p – 68
6p – 4p = 68 + 8
2p = 76
P = 38

8)½ x 40 x 14 = 280 (unshaded)
Shaded area→280 – (26 x 4) = 176

Us : s
280: 176
=35 : 22
The ratio is 22 : 35

9)50 x 4 = 200
200 – 108 = 92
59 + 33 = 92 (x)
57 + 35 = 92 (√)
ANS: 57

10)$6 x 60 = $360
145 x $2 = $290
$360 – $290 = 70
70÷2 = 35

11)A→½ x 34cm x 17cm = 289cm^2
B→½ x 17cm x 68cm = 578cm^2
C→½ x 34cm x 34cm = 578cm^2
68cm x 34cm = 2312cm^2
2312cm^2 – 578cm^2 – 578cm^2 – 289cm^2 = 867cm^2

12)a)A→8a + 4
B→8a + 6
M→8A + 33 + 4
8a + 6 + 4 = 8a +10

b)A→8 x 3 + 4 = 28
M→8 x 3 + 33 + 4 = 61
61 + 28 = 89

13)a)∠x→180° − 120° − 40° = 20°
b)∠FOG→180° − 40° − 40° = 100°
∠y→360° − 100° = 260°

14) M : W
500 : 750
(2U) (3U)
2U 4U
-1U -2U
4U : 7U

a)1U→750 − 500 = 250
4u→1000 (250 x 4)
b)11u→250 x 11 = 2750

15)A + C→140 − 60 = 80
A + B→320 − 60 = 260
B + C→380 − 60 = 320
Diff btwn B & C→260 − 80 = 180
C→320 + 180 = 500
→500 ÷ 2 = 250
→250 − 180 = 70
A→80 − 70 = 10
A : C
10: 70
=1 : 7

16)20u − 400 = 5u − 25
20u − 5u = 15u
400 − 25 = 375→15u
375 ÷ 15 = 25→1u
25 x 9 = 225

17)$378 − ($12x4) = $330
1 set→ BC + CC
= $12 + $18 = $30
$330 ÷ $30 = 11 (sets)
BC→11 + 4 = 15
CC→11
T + L→15 + 11 = 26

18)a)12
b)4