SEMESTRAL ASSESSMENT 1

PRIMARY 5
MATHEMATICS PAPER 1
(BOOKLET A)

11 MAY 2016

Total time for Booklets A and B: 50min

The use of calculator is **NOT ALLOWED**.

Paper 1 (Booklet A)

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. **You are not allowed to use a calculator.** (20 marks)

1   Nine million, three hundred thousand and seven is _____.

    (1)   900 307

    (2)   930 007

    (3)   9 000 307

    (4)   9 300 007   (   )

2   What is the value of 5 000 × 80?

    (1)   4000

    (2)   40 000

    (3)   400 000

    (4)   4 000 000   (   )

3   Express $2\frac{5}{9}$ as a decimal. Round off your answer to 2 decimal places.

    (1)   0.55

    (2)   0.56

    (3)   2.55

    (4)   2.56   (   )

4 Find the sum of $\frac{1}{5}$ and $\frac{1}{6}$.

(1) $\frac{1}{11}$

(2) $\frac{2}{11}$

(3) $\frac{1}{30}$

(4) $\frac{11}{30}$ 　　　　　　　　　　　(　　)

5 What is the product of $\frac{5}{6}$ and $\frac{2}{3}$?

(1) $\frac{7}{18}$

(2) $\frac{5}{9}$

(3) $\frac{7}{9}$

(4) $1\frac{1}{9}$ 　　　　　　　　　　　(　　)

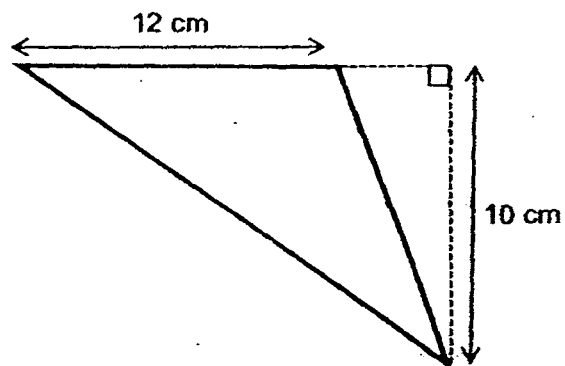6   Find the value of $\dfrac{9}{4} \div 5$.

    (1) $\dfrac{4}{45}$

    (2) $\dfrac{9}{20}$

    (3) $2\dfrac{2}{9}$

    (4) $11\dfrac{1}{4}$ (   )
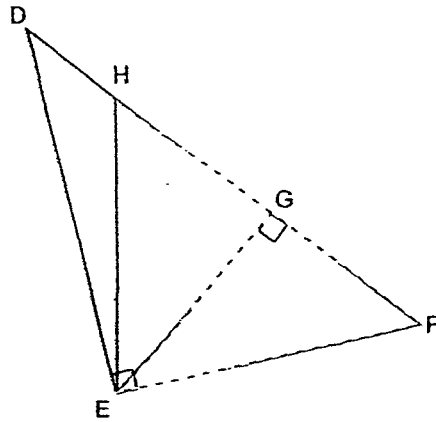
7   Find the area of the triangle.

    (1)   60 cm²

    (2)   90 cm²

    (3)   120 cm²

    (4)   180 cm²

                                                                (   )

8

Name the height of Triangle DEH if DH is the base.

(1) DE

(2) EF

(3) EG

(4) EH   (   )

9    $4 : 7 = 28 : \boxed{?}$. What is the missing number in the box?

(1) 7

(2) 31

(3) 49

(4) 56   (   )

10   June baked twice as many cookies as Claire. Claire baked twice as many cookies as Sunny. What is the ratio of the number of ~~tarts~~ *cookies* baked by June to the number of ~~tarts~~ *cookies* baked by Sunny?

(1) 1 : 4

(2) 1 : 8

(3) 4 : 1

(4) 8 : 1   (   )

11   270 000 visitors went to an IT fair when rounded off to the nearest thousand. Which could be the possible number of visitors?

(1) 269 099

(2) 269 971

(3) 270 500

(4) 270 909   (   )

12   Find the value of $25 \div 5 \times 5 + (76 - 20 + 40)$.

(1) 17

(2) 41

(3) 97

(4) 121   (   )

13   John gave $\frac{1}{8}$ of his salary to each of his two parents. He gave $\frac{1}{3}$ of the remainder to his son. What fraction of his salary had he left?

(1) $\frac{1}{2}$

(2) $\frac{7}{8}$

(3) $\frac{7}{24}$

(4) $\frac{13}{24}$ (   )

14   There are 16 sweets and 32 chocolates in a basket. What is the ratio of the number of chocolates to the total number of sweets and chocolates?
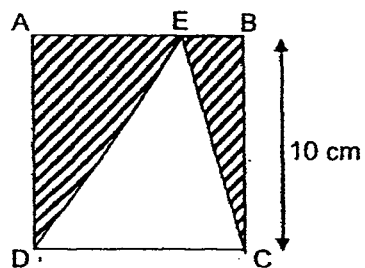
(1) 1 : 3

(2) 2 : 3

(3) 3 : 1

(4) 3 : 2   (   )

15   ABCD is a square. What is the area of the shaded part?

(1)   20 cm²

(2)   40 cm²

(3)   50 cm²

(4)   100 cm²   (   )

-- End of Booklet A --

SEMESTRAL ASSESSMENT 1

PRIMARY 5
MATHEMATICS PAPER 1
(BOOKLET B)

11 MAY 2016

Total time for Booklets A and B: 50min

6. The use of calculator is **NOT ALLOWED**.

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 write in this space.

16   In 4 500 207, what is the value of the digit 5?

Ans: _____

17   500 000 ÷ _____ = 500

What is the missing number in the blank?

Ans: _____

18   If 200 g of salmon cost $6, how much will 2 kg of salmon cost?

Ans:$ _____

19   Find the value of $\frac{7}{9} - \frac{2}{3}$.

Ans: _____

20   Andy had 56 sweets. He gave $\frac{2}{7}$ of them to Bella. How many sweets had Andy left?

Ans: _____

21   Belinda had $\frac{4}{5}$ kg of sugar. She then packed the sugar equally into 8 packets. What was the mass of each packet of sugar?

Ans: _____ kg

22   Find the area of triangle ABC.

Ans: _____ cm²

_____

23   Use a set-square to draw and label the height of the triangle for the given base.

Base
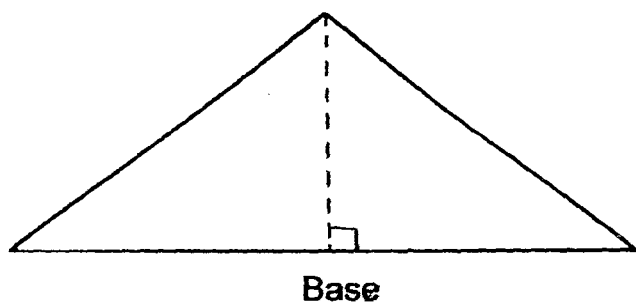
24   Given that A : B = 4 : 3 and B : C = 2 : 5, find A : C.

Ans: _____

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25   Write the ratio 45 : 63 : 72 in its simplest form.

Ans: _____

Questions **26** to **30** carry 2 marks each. Show your working clearly and write your answers the spaces provided. For questions which require units, give your answers in the units stated. **(10 marks)**

26   A sling bag costs $6 more than a water bottle. If the total cost of the sling bag and 2 such water bottles is $27, find the cost of 5 such water bottles.

Ans:$ _____

27   The breadth of a rectangular soccer field is $\frac{1}{3}$ its length. The perimeter of the soccer field is 420 m. Find the breadth of the soccer field.

Ans:_____ m

28   George and Michael had a total of $428. After George saved another $52 and Michael spent $\frac{1}{3}$ of his money, they both had the same amount of money. How much money did George have at first?

Ans: $ _____

29

What fraction of the figure above is unshaded? (Leave your answer in its simplest form.)

Ans: _____

30   There are some red, blue and yellow balls in a box. The ratio of the number of red to the number of blue balls is 2 : 3. The number of blue to the number of yellow balls is 6 : 7. There are 16 more blue than red balls. How many red balls are there?

Ans: _____

END OF PAPER 1

SEMESTRAL ASSESSMENT 1

PRIMARY 5
MATHEMATICS
PAPER 2

11 MAY 2016

Total time: 1h 40min

The use of an approved calculator is expected, where appropriate.

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 answer in the units stated. **(10 marks)**

1   Paul and Jane have some picture cards. After Paul has given 36 picture cards to Jane, he has 24 picture cards more than her. How many more picture cards than Jane does Paul have at the beginning?

Ans: _____

2   The parking charges at MEX Shopping Mall are as follows:

For the 1st hour	$3
For every subsequent half hour or part thereof	$1.20

John parked his car for 3 hours.

How much did he pay for the parking charges?

Ans:$ _____

3   If $\frac{1}{3}$ of a number is 25, what is $\frac{2}{5}$ of the number?

Ans. _____

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4   The figure below is made up of 2 triangles, ABC and ACD.
The length of AD is thrice as much as the length of BC. AB is
perpendicular to AD and BC. Find the area of figure ABCD.
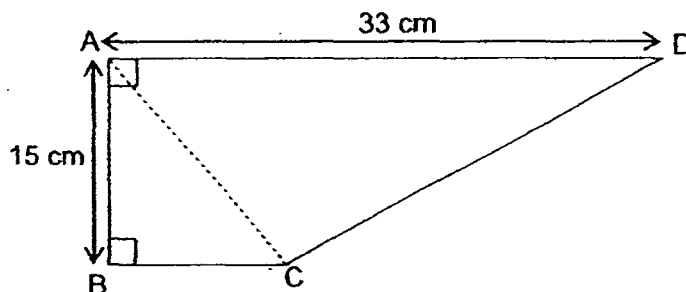
Ans: _____ cm²

5   The ratio of Brenda's money to Claire's money is 2 : 9. They have
     $385 in total. How much money must Claire give Brenda so that each
     of them has an equal amount of money?

Ans: $_____

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)

6   In Old MacDonald's farm, there are three times as many chickens as sheep. Given that there are 300 legs altogether, how many chickens are there in the farm?

Ans: _____ [3]

7   For every $15 Andre saved, his father would give him $2.50. If he saved a total of $345 by himself after some months, how much would he have received from his father?

Ans: . _____ [3]

8   Mrs Wong spent $\frac{3}{7}$ of her salary on food and $\frac{3}{4}$ of the remainder on other daily expenses. What fraction of her salary was left?

Ans: _____ [3]

9   The figure below is made up of two shaded triangles within a rectangle. Find the area of the unshaded part.

15 cm

←——— 12 cm ———→←— 8 cm —→
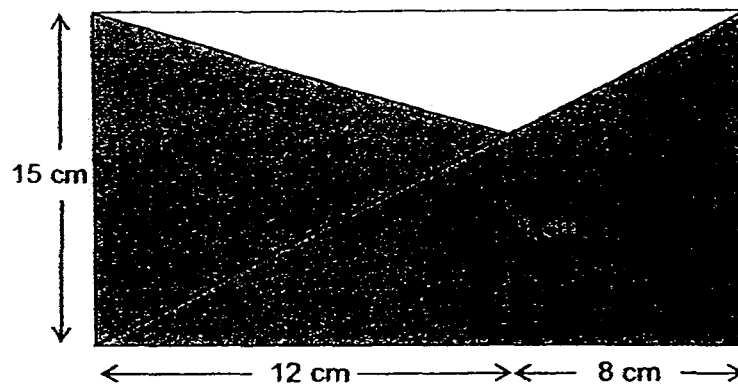
Ans:_____ [3]

10   Last Sunday, the ratio of the number of boys to the number of girls at the circus was 3 : 5. There are 148 fewer boys than girl. How many children were at the circus?

Ans: _____ [3]

---

11   Mrs Billy made 248 more white chocolate cookies than dark chocolate cookies. After she gave away $\frac{5}{7}$ of the white chocolate cookies and $\frac{1}{3}$ of the dark chocolate cookies, there were an equal number of white chocolate cookies and dark chocolate cookies left. How many white chocolate cookies did she give away?

Ans: _____ [3]

12   A sum of $728 is divided among a group of people. $\frac{7}{8}$ of the people

receive $4 each, $\frac{1}{3}$ of the remainder receive $3 each and the rest

receive $2 each. How many people are there altogether?

Ans: _____ [4]

13   ABFG is a square. The length of CD is $\frac{3}{5}$ of BF and the area of BCDE is 864 cm². Given BC = EF, find the area of the shaded parts.
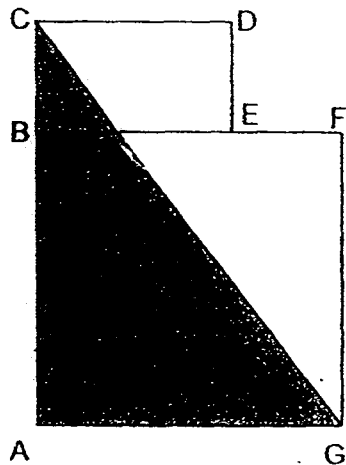
Ans: _____ [4]

14   The number of balls in Box A was 38 more than that in Box B. When
      Belicia removed 61 balls from Box A and placed them in Box B, the
      ratio of the number of balls in Box A to the number of balls in Box B
      became 1 : 4. Find the number of balls in each box at first.

Ans: Box A: _____ [2]

       Box B: _____ [2]

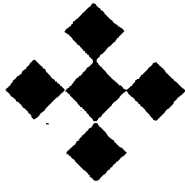15. Study the pattern below. The figures are made up of black diamonds. Each black diamond is denoted by ◆ .
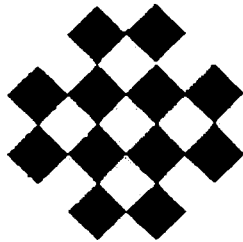
Figure 1   Figure 2   Figure 3
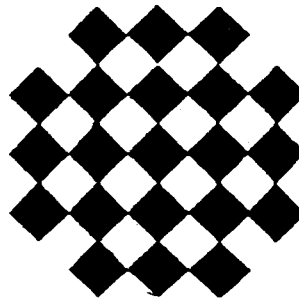
(a) How many black diamonds will there be in Figure 4?
(b) How many black diamonds will there be in Figure 10?
(c) Which figure is made up of 396 black diamonds?

Answer: (a)_____ [2]

(b)_____[2]

(c) Figure _____ [1]

16   Timmy's monthly salary was $4200. Every month, he would give $\frac{3}{10}$ of his salary to his parents and pay $850 for his car loan. He would also spend $\frac{2}{5}$ of the remaining money on food and save the rest. What fraction of his monthly salary did he spend on his car loan and food?
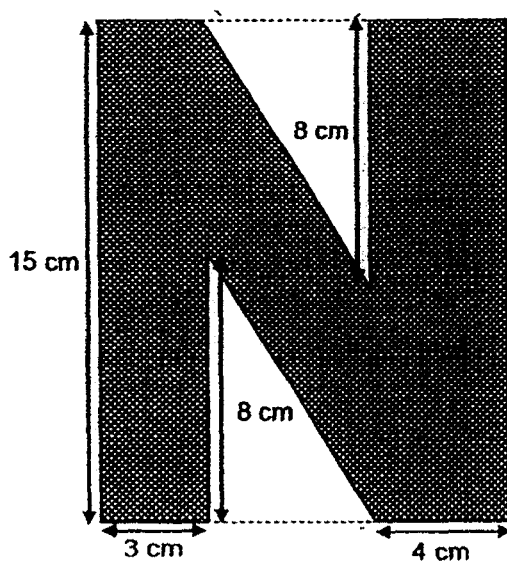
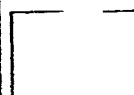(Leave your answer in its simplest form.)

Ans: _____ [5]

17   Benny painted a letter 'N' on a piece of rectangular cardboard that has a length of 15 cm. The ratio of the length to the breadth of the cardboard is 5:4. Both triangles were identical. What area of the cardboard was painted?

Ans: _____ [5]

18   The ratio of the number of chickens in Farm A to the number of chickens in Farm B was 5 : 9. There were 48 fewer chickens in Farm A than in Farm B. When 5 chickens escaped from Farm B, the farmer in Farm B bought another 9 chickens. What was the new ratio of the number of chickens in Farm A to the number of chickens in Farm B? Give your answer in the simplest form.

Ans: _____ [5]

- End of Paper 2 -

ANSWER KEY

Paper 1

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

Q16 500 000

Q17 1000

Q18 $60
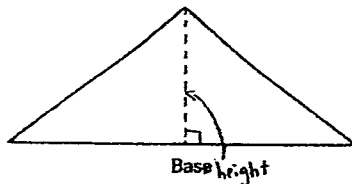
Q19 $\frac{1}{9}$

Q20 $7u \rightarrow 56$
$1u \rightarrow 56 \div 7 = 8$
$2u \rightarrow 8 \times 2 = 16$
$56 - 16 \Rightarrow$ __40 sweets left__

Q21 $\frac{4}{5} \div \frac{8}{1} = \frac{4}{5} \times \frac{1}{8} \Rightarrow \frac{1}{10}$ kg

Q22 $\frac{1}{2} \times 5 \times 6 \Rightarrow$ __15 cm²__

Q23

Base height

Q24 8 : 15

Q25 5 : 7 : 8

1

Q26 $3u \rightarrow 27 - 6 = 21$
$1u \rightarrow 21 \div 3 = 7$
$5u \rightarrow 7 \times 5 \Rightarrow \underline{\$35}$

Q27 $8u \rightarrow 420$
$1u \rightarrow 420 \div 8 \Rightarrow \underline{52.50\ m}$

Q28 $5u \rightarrow 428 + 52 = 480$
$1u \rightarrow 480 \div 5 = 96$
$2u \rightarrow 96 \times 2 = 192$
$192 - 52 \Rightarrow \underline{\$140}$

Q29 $\frac{3}{4}$

Q30 $6u - 4u = 2u$
$2u \rightarrow 16$
$1u \rightarrow 16 \div 2 = 8$
$4u \rightarrow 8 \times 4 \Rightarrow \underline{32}$

Paper 2

Q1 $36 + 24 + 36 \Rightarrow \underline{96\ cards}$

Q2   First hour $\rightarrow \$3$
One hour $\rightarrow \$1.20 \times 2 = \$2.40$
One hour $\rightarrow \$1.20 \times 2 = \$2.40$
Total $\rightarrow \$3 + \$2.40 + \$2.40 \Rightarrow \underline{\$7.80}$

Q3 $5u \rightarrow 25$
$1u \rightarrow 25 \div 5 = 5$
$6u \rightarrow 5 \times 6 \Rightarrow \underline{30}$

Q4 $AD \rightarrow 33$
$BC \rightarrow 33 \div 3 = 11$
Area of ABC $\rightarrow \frac{1}{2} \times 15 \times 11 = 82.50$
Area of ACD $\rightarrow \frac{1}{2} \times 15 \times 33 = 247.50$
Total area $\rightarrow 247.50 + 82.50 \Rightarrow \underline{330\ cm^2}$

Q5 $2u + 9u = 11u$
$11u \rightarrow 385$
$1u \rightarrow 385 \div 11 = 35$
$11 \div 2 = 5.5$
$9u - 5.5u = 3.5u$
$3.5u \rightarrow 35 \times 3.5 \Rightarrow \underline{\$122.50}$

Q6   10u → 300
1u → 300 ÷ 10 = 30
3u → 30 x 3 ⇒ <u>**90 chickens**</u>

Q7   345 ÷ 15 = 23
23 x 2.50 ⇒ <u>**$57.50**</u>

Q8 $\frac{1}{7}$

Q9   60 cm²

Q10 5u – 3u = 2u
2u → 148
1u → 148 ÷ 2 = 74
8u → 74 x 8 ⇒ <u>**592 children**</u>

Q11 $\frac{2}{7}$ of White → $\frac{2}{3}$ of Dark
7u – 3u = 4u
4u → 248
1u → 248 ÷ 4 = 62
5u → 62 x 5 ⇒ <u>**310 white chocolate cookies**</u>

Q12 1 set → 24 people
21 x $4 + $3 + $2 + $2 = $91
728 ÷ 91 = 8 no. of sets
24 x 8 ⇒ <u>**192 people**</u>

Q13 3 : 2 = 36 : 24
$\frac{1}{2}$ x 60 x 84 ⇒ <u>**2520 cm²**</u>

Q14 3u → 23 + 38 + 23 = 84
1u → 84 ÷ 3 = 28
Box A → 28 + 61 ⇒ <u>**89 balls**</u>
Box B → 28 + 23 ⇒ <u>**51 balls**</u>

Q15a 32 diamonds

Q15b 140 diamonds

Q15c Figure 18

3

Q16 $4200 \div 10 = 420$
$420 \times 3 = 1260$
$1260 + 850 = 2110$
$4200 - 2110 = 2090$
$2090 \div 5 = 418$
$418 \times 2 = 836$
$850 + 836 = 1686$
$\dfrac{1686}{4200} \Rightarrow \dfrac{281}{700}$

Q17 $5u \rightarrow 15$
$1u \rightarrow 15 \div 5 = 3$
Breadth $\rightarrow 3 \times 4 = 12$
Area of 1 triangle $\rightarrow \dfrac{1}{2} \times 8 \times 5 = 20$
Area of 2 triangles $\rightarrow 20 \times 2 = 40$
Area of whole figure $\rightarrow 15 \times 12 = 180$
Painted $\rightarrow 180 - 40 \Rightarrow \underline{140 \text{ cm}^2}$

Q18 $4u \rightarrow 48$
$1u \rightarrow 48 \div 4 = 12$
$9u \rightarrow 12 \times 9 = 108$
$108 - 5 = 103$
$103 + 9 = 112$
$5u \rightarrow 12 \times 5 = 60$
$60 : 112$
$30 : 56$
$\underline{15 : 28}$

End

4