



Royal College - Colombo 07

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Grade 7 – First Term Test – April 2019

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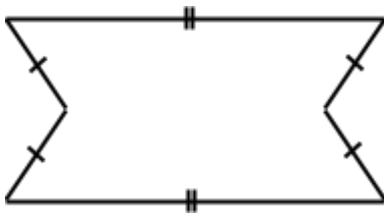
Mathematics – I

.Ks;h – I

Name :- Grade : -..... Index number:-.....

◆ Answer all the questions on the paper itself.

1'



Draw axes of symmetry of the figure.

2' $A = \{1, 2, 3, 4, 5\}$, Represent the set A by a Venn diagram.

3' Simplify.

$$60 \div 10 - 6$$

4' The number 85 1 is divisible by 3, find two suitable digits for the empty space.

5' Simplify

$$(12 \div 3) + 2 \times 5$$

6' Name the decade and the century to which year AD 2021 belongs.

Decade:

Century :

7' Write all factors of 8.

8' Find all the prime factors of 15.

9' Write 16 in index notation with 4 as the base.

10' Find the value of $3x^2$ when $x = 3$.

11' To which century does the time period from AD 1801 to AD 1900 belong?

12' Underline the leap years from the following years.

AD 1996

AD 1900

AD 1600

AD 2018

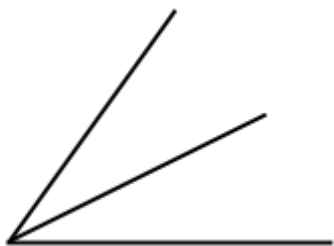
13' $ABCD$ is a rectangle. Name a pair of parallel lines.



14' Find the value of $(+ 3) + (- 2)$ using the number line.



15' Name two angles given in the figure.



16' Find the value.

$$\left(-\frac{4}{5}\right) + \left(-\frac{1}{5}\right)$$

17' Subtract.

Years	Months	Days
5	8	15
2	7	25
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18' Add.

Months	Days
7	25
2	15
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19' Write down the product $a \times 5 \times a \times 5 \times a \times a$ using index notation.

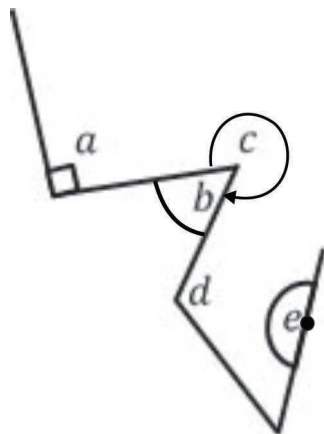
20' Find the value of $2a^2 + b^2$ when $a = 2$ and $b = 5$

Mathematics – II Ks;h – II

- ◆ Answer the first question and another 4 questions only.
- ◆ First question carries 16 marks and the other questions carry 11 marks each.

1' (a) Recollect the activity that you have done in the class room regarding the lesson angles and answer the following questions.

Angle	Type of angle
a	
b	
c	
d	
e	



(5 marks)

- (b) (i) What is the instrument that is used to measure the angles in the instrument box? (1 mark)
- (ii) What is the standard unit of measuring the angles? (1 mark)

(c) In the given angle, write

(i) The vertex

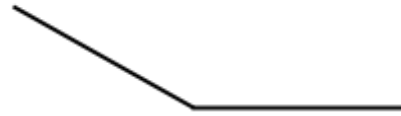
(1 mark)

(ii) The arms

(2 marks)

(iii) Name the given angle and Measure and write the magnitude of it.

(2 marks)



(d) In the given figure the straight line segments AB and DC meet each other at C .

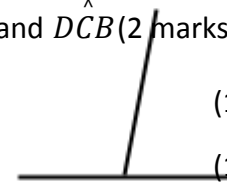
(i) Measure and write down the magnitudes of \hat{ACD} and \hat{DCB} (2 marks)

(ii) Find the value of $\hat{ACD} + \hat{DCB}$

(1 mark)

(iii) Name a straight angle of the above figure.

(1 mark)



2' (i) Write down the first two multiples of 24.

(1 mark)

(ii) Find four factors of 24.

(2 marks)

(iii) (a) Express 60 as a product of prime factors.

(2 marks)

(b) Find prime factors of 60.

(2 marks)

(iv) 12, 18, and 30 are written as a product of prime factors as follows.

$$12 = 2 \times 2 \times 3$$

$$18 = 2 \times 3 \times 3$$

$$30 = 2 \times 3 \times 5$$

Using the above product of 12, 18 and 30, find

(a) H.C.F.

(b) L.C.M.

(02×02 = 04

marks)

- 3' (a) Write down the following product using index notation.
- (i) $a \times a \times a \times a$
- (ii) $a \times 5 \times a \times 5 \times a \times 5 \times 5$ (2 marks)
- (b) Find the value of each of the following expressions when $a = 2$ and $b = 5$.
- (i) a^5
- (ii) $2ab^2$ (4 marks)
- (c) (i) Write 32 in index notation with 2 as the base. (2 marks)
- (ii) Fill in the blanks. (2 marks)
- $64 = 2^{\square} = 4^{\square}$
- (iii) Fill in the blanks using $<$ or $>$.
- 2^5 _____ 5^2 (1 mark)
- 4' (a) (i) Name two mathematical instruments that is used to draw paralld line. (2 marks)
- (ii) Draw a straight line segment of length 10cm and name is as PQ. (2 marks)
- (iii) Mark point A above PQ such that perpendicular distance from A to PQ is 4cm. (2 marks)
- (iv) Draw a straight line segment which passes through A and is parallel to PQ. (1 mark)
- (b) Find the value without using a number line.
- (i) $(+ 8) + (- 2)$
- (ii) $(- 3) + (- 2)$ (2 marks)
- (c) Write a pair of directed numbers of which the sum is 0. (2 marks)

5' (a) If the following statements clearly defined a set, place $\sqrt{\quad}$ if not place \times .

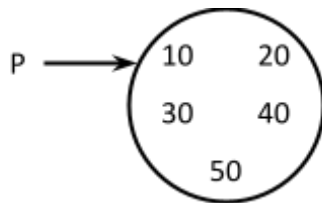
- | | | | | |
|-------|----------------------------|----------------|----------|-----------|
| (i) | Yellow coloured flowers | $\sqrt{\quad}$ | \times | |
| (ii) | Beautiful clothes | $\sqrt{\quad}$ | \times | |
| (iii) | Square numbers from 1 to 5 | $\sqrt{\quad}$ | \times | |
| (iv) | Talented singers | $\sqrt{\quad}$ | \times | (4 marks) |

(b) "Odd numbers from 1 to 10"

Express the above statement in three different forms of representing a set.

(3 marks)

(c)



(i) Write down the set P in terms of a common property by which the elements of the set can be clearly identified. (2 marks)

(ii) Write the number of elements of the set P.

(1 marks)

(d) Who introduced the method of representing a set by a closed figure? (1 marks)

6' (a) The annual sport meet of Royal College was held on 20th of February 2019.

- (i) Write down the above date in the standard form. (2 marks)
- (ii) The sport meet was held from 1.30 pm to 6.45 pm. Express the duration of the sport meet in hours and minutes. (2 marks)
- (iii) Nipun says that AD 1896 is a leap year but AD 1900 is not a leap year. Is this statement true or false? Give reasons. (2 marks)
- (iv) What is the name given to the time period from AD 2001 to AD 2100.

(1 marks)

(b) (i) Add.

Years	Months	Days
3	8	20
2	5	10
<hr/>		

(ii) Subtract.

Years	Months	Days
3	8	05
1	2	25
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(4 marks)