



Visakha Vidyalaya – Colombo 05

First Term Test – 2022

Mathematics

Grade 7

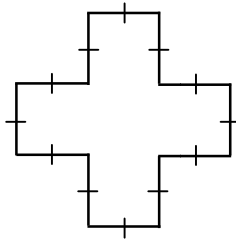
Time : $2\frac{1}{2}$ hours

Name / Index Number :

Part I

* Answer all questions on this paper itself.

1. Write the number of axes of symmetry of the following figures.



2. Write 2000456790

(i) in standard form

(ii) in words

3. P is the set of prime numbers between 0 and 10. Represent the elements of set P in a Venn diagram.

4. The number 41 2 is divisible by 9. Find the suitable digit for the empty space.

5. Simplify.

(i) $(+8) + (-10)$

(ii) $(-6) + (-8)$

6. Write all the factors of 54.

7. Write 128 as a power of 2.

8. From the following years select the leap years.

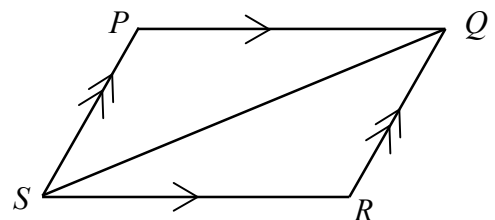
(i) A.D. 1200

(ii) A.D. 1924

(iii) A.D. 1800

(iv) A.D. 1998

9. Name 2 pairs of parallel lines of the given figure.



10. Find the H.C.F. of 6 and 15 by writing factors.

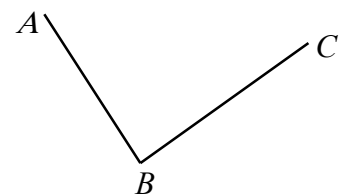
11. If $a = 2$ and $b = 5$, find the value of $a^2 b$. -3-

12. What type of angle is formed clockwise between North and South east?

13. Write the suitable value for the blank. $\dots\dots\dots + (- 8.5) = (- 4.7)$

14. Write 60 as a product of prime factors.

15. Name the arms and the vertex of the given angle.



16. Select the numbers divisible by 3, 4, 6 and 9.

- (i) 180 (ii) 582 (iii) 718 (iv) 216

17. 3 bells ring at intervals of 3 minutes, 5 minutes and 6 minutes respectively. If they all ring together at 6.00 a.m. at what time will they ring together again?

18. Write $2 \times x \times y \times x \times y \times 2$ in index notation.

19. Nimali came home at 3.08 p.m. Write this time in international standard form.

20. Fill in the blanks.

- (i) If the magnitude of an angle does not change, then it is in nature.
- (ii) Two parts that are in either sides of the axis of symmetry of a bilaterally symmetric figure are equal in and area.

* *

Part II

*** Answer all the questions.**

1. (a) (i) Write all possible ways of writing 24 as a product of 2 factors. (2 marks)
(ii) Write all factors of 24. (2 marks)
(iii) Write 48 as a product of prime factors. (2 marks)
- (b) Find the H.C.F. of 12, 24, 36 using the method of division. (2 marks)
- (c) Find the L.C.M. of 12, 24, 36 (2 marks)

2. Amaya's date of birth is 2010.04.02. Her sister Nathali's date of birth is 2000.08.13.
 - (i) To which decade does Nathali's date of birth belong ? (1 mark)
 - (ii) To which century does Amaya's date of birth belong ? (1 mark)
 - (iii) How much older is Nathali than Amaya ? (2 marks)
 - (iv) Amaya's mother is 25 years 8 months 25 days elder than Amaya. Find the date of born of Amaya's mother ? (2 marks)
 - (v) Amaya's father was born in 1978. Name the members of Amaya's family who birth in a leap year ? (2 marks)
 - (vi) Indicate 225 days in months and days. (2 marks)

3. (a) Find the value of the following using the number line
 - (i) $(-5) + (-3)$ (2 marks)
 - (ii) $(-4) + (+1)$ (2 marks)
- (b) Simplify.
 - (i) $(-9) + (+5)$ (1 mark)
 - (ii) $(+\frac{3}{7}) + (-\frac{1}{7})$ (1 mark)
 - (iii) $(+\frac{1}{5}) + (-\frac{1}{5})$ (1mark)
 - (iv) $(-3.88) + (5.23)$ (1 mark)
- (c) Y is the set of integers between -3 and 2 . List out the elements of set Y in curly brackets. (2 marks)

4. (i) Find the value and the power when base and index of 2^3 is changed with one another. (2 marks)
- (ii) Write 56 as a product of power of prime factors. (3 marks)
- (iii) Find the value of $5^2 \times 2^2$. (2 marks)
- (iv) If $x = 3$ and $y = 4$ find the value of $2x^3b^2$. (3 marks)

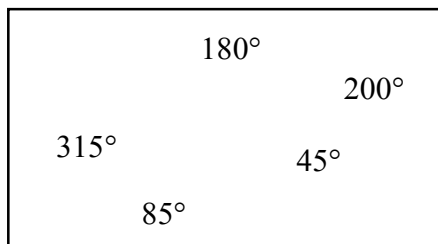
5. (a) The fixed fare of a taxi service is Rs. 200 and Rs. 60 will be charged for 1 km.
- (i) Write down a mathematical expression for the amount paid by Kasun who travelled 25 km by the taxi. (2 marks)
- (ii) Find the amount Kasun should pay for the taxi by simplifying the above expression. (2 marks)

(b) Simplify.

(i) $30 \times 10 \div 5 \times 2$ (1 mark)

(ii) $20 - 3(7 + 1) \div 6$ (2 marks)

(c) Classify the following angles according to their magnitudes.



(3 mark)

6. (a) (i) Draw a triangle and name it as ABC . (1 mark)
- (ii) Draw a parallel line to AB passing through C using a ruler and a set square. (2 marks)
- (iii) Draw a parallel line to BC passing through A as above and name the intersection point of the two parallel lines as D . (3 marks)
- (iv) Write a suitable name for the quadrilateral $ABCD$. (1 mark)

(b) Draw the following angles using protractor.

(i) $\hat{X}Y\hat{Z} = 125^\circ$ (1 mark)

(ii) $\hat{P}Q\hat{R} = 310^\circ$ (2 marks)
