विद्या सर्वर्थि साधिका

ANANDALAYA

ANNUAL EXAMINATION

Class : VI

Subject: Mathematics M.M: 80

Date : 07-03-2023 Time:3 Hours

General Instructions:

i) All questions are compulsory.
ii) This question paper contains 39 questions.
iii) Questions 1 – 16 in Section A are objective type questions carrying 1 mark each.
iv) Questions 17– 26 in Section B are short-answer type questions carrying 2 marks each.
v) Questions 27 – 34 in Section C are short -answer type questions carrying 3 marks each.
vi) Questions 35 – 39 in Section D are long-answer type questions carrying 4 marks.

SECTION-A

1. Write the integers lying between -1 and 1. (1)

2. If the sum of two angles is equal to an obtuse angle, then which of the following is not possible? (1)

   A) One obtuse angle and one acute angle. C) Two acute angles.
   B) One right angle and one acute angle. D) Two right angles.

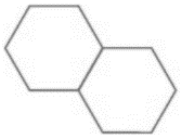
3. Is 5335 is divisible by 11? Justify your answer. (1)

4. Arrange the given integers in increasing order: $-106,\quad 16,\quad -320,\quad -32$ (1)

5. Express 0.238 in fraction and reduce it to the lowest form. (1)

6. In a pictograph, if a symbol ♣ represents 20 flowers in a basket, then ♣♣♣ stands for how many flowers? (1)

7. Two regular hexagons of perimeter 30cm each are joined as shown in the figure. What is the perimeter of the figure? (1)



8. Which of the following represents an equation? (1)

   A) $x-1$ B) $x+1$ C) $x-1=0$ D) $x+1>0$

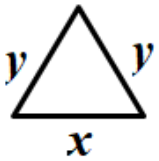
9. If a box has 25 mangoes, how many mangoes are there in n such boxes? (1)

10. What is the value of q, in the equation, $\frac{q}{2}=3$? (1)

    A) 6 B) 8 C) 3 D) 2

11. Find the rule which gives the number of matchsticks required to make the pattern of letter 'V' as  . Use a variable to write the rule. (1)

12. What is the perimeter of the given triangle? (1)



13. Fill in the box: $\frac{3}{5}=\frac{\square}{25}$ (1)

14. In a class there are 20 boys and 40 girls. What is the ratio of the number of girls to the number of boys? (1)

15. Reduce the ratio 120:180 to the lowest form. (1)

16. Are 12, 18, 28 and 12 in proportion? Justify your answer. (1)

SECTION-B

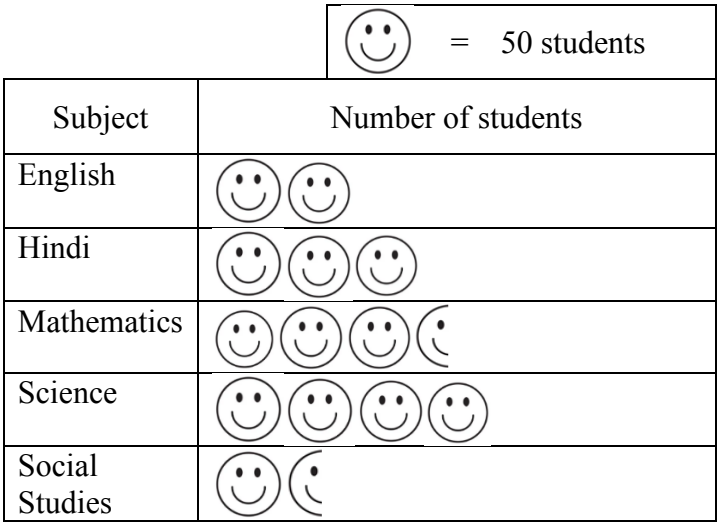
17. Salim and Anand are running around a circular field. Salim takes 16 minutes to take one round, while Anand completes the round in 20 minutes. If both start simultaneously and go in the same direction, after how much time will they meet at the starting point? (2)

18. The sum of two integers is 238. If one of them is -122. Find the other. (2)

19. The temperature on a certain morning is – 11 °C at 5 a. m. If the temperature drops 3 degrees at 6 a.m. and rises 5 degrees at 8 a.m. What is the temperature at 8 a.m.? (2)

20. Which is greater among (a) and (b)? By how much? (2)
(a) 1metre 40 centimetre + 60 centimetre
(b) 2.6 metre

21. Following pictograph shows a survey carried in a certain school to find out the popular subjects among students of classes VI to VIII. (2)



a) Which subject is most popular among the students?
b) How many students like Mathematics?
c) Find the number of students who like Hindi and Social Studies.

22. Perimeter of an isosceles triangle is 50cm. If one of the two equal sides is 18cm, find the third side. (2)

23. Find the ratio of: (2)
a) 2m to 35cm. b) 8kg to 400g

24. Divide ₹ 2000 between Asha and Kiran in the ratio $2 : 3$. (2)

25. Draw and name a polygon each which has - (2)
a) Two lines of symmetry
b) Three lines of symmetry.
Also draw the lines of symmetry in each.

26. Draw a circle with centre O and radius 4.5 cm. Draw any chord AB. Construct the perpendicular bisector of AB and examine if it passes through O. (2)

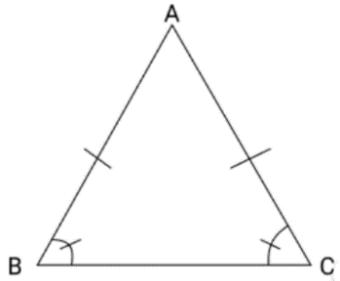
SECTION-C

27. 210 oranges, 252 apples and 294 pears are equally packed in cartons so that no fruit is left. What is the greatest possible number of cartons needed? (3)

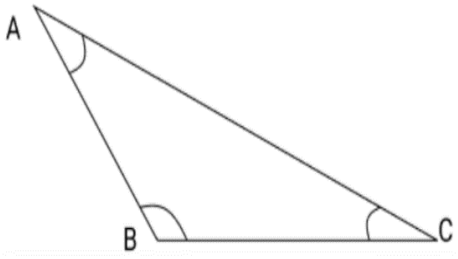
28. Look at the pictures carefully and answer the questions: (3)

a) For the given triangles name the type of triangle

i)



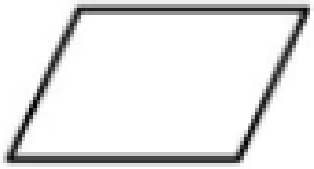
ii)



b) Name the quadrilaterals given below

i)

ii)

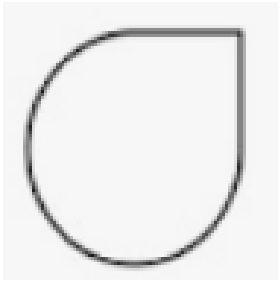


c) Which of the given figures are polygons?

i)

ii)

iii)



29. Solve: (3)

a) $30 + (-25) + (-10)$ b) $49 - (-40) - (-3) + 69$ c) $135 - 225 - 3$

30. Answer the following: (3)

a) Arrange the given numbers in descending order: 0.011, 1.001, 0.101, 0.110

b) Add: 20.08; 2.198; 200.2

c) Subtract 27.562 from 52.15

31. The lengths in km (rounded to the nearest hundred) of some major rivers of India are given below. Draw a bar graph to represent the below data. (3)

Names of the River	Length (in km)
Narmada	1300
Mahanadi	900
Brahmaputra	2900
Ganga	2500
Kaveri	800
Krishna	1300

32. A rectangle and a square have the same perimeter 100 cm. Find the side of the square. If the rectangle has a breadth 2 cm less than that of the square. Find the breadth, length and area of the rectangle. (3)

33. Let Kanika's present age be x years. Write the expressions for the given sentences in the following table, showing ages of her relatives: (3)

	Situation in ordinary language	Expression
i)	Her brother is 2 years younger.	_____
ii)	Her father's age exceeds her age by 35 years.	_____
iii)	Her mother's age is 3 years less than that of her father.	_____
iv)	Her grandfather's age is 8 times her age.	_____

If her father's age is 40 years, find her age by picking up the solution from the values given in the bracket: (10, 0, 5, 20)

34. a) Which of the figures do not have line of symmetry? (3)

A)  B)  C)  D) 

b) Which of the letters do not have line of symmetry?

A) M B) H C) K D) S

c) How many lines of symmetry do the following have: i) Circle ii) Square

SECTION-D

35. Write the answer for the following: (4)

a) The smallest and the greatest prime number from 1 to 100.

c) The third multiple of: i) 9 ii) 12.

d) The factors of: i) 53 ii) 19.

e) Two prime numbers such that they have the same digits.

36. a) What is the measure of the angle formed between the hands of the clock when it displays 7'O clock? Also write the type of angle. (4)

b) How many edges a cylinder has?

c) Draw a rough sketch of a pentagon and draw its diagonals.

37. Mrs. Ranjini purchased 15kg 500g rice, 25kg 750g flour, 3kg 250g sugar and 250g of cashew. Find the total weight of her purchase and express the total weight in kg. Is the total weight more than 50 kg or less and by how much? (4)

38. a) The perimeter of a square garden is 48m. A small flower bed covers 18sqm area inside this garden. What is the area of the garden that is not covered by the flower bed? (4)

b) Find all the possible dimensions (in natural numbers) of a rectangle with an area of 36sqcm and find their perimeters.

39. Draw a line segment OA of 8cm. Construct $\angle AOB = 120°$, $\angle AOC = 90°$ and $\angle AOD = 45°$. (4)