



**ANANDALAYA**  
**ANNUAL EXAMINATION**  
Class: VI

Subject: Mathematics  
Date : 07-03-2025

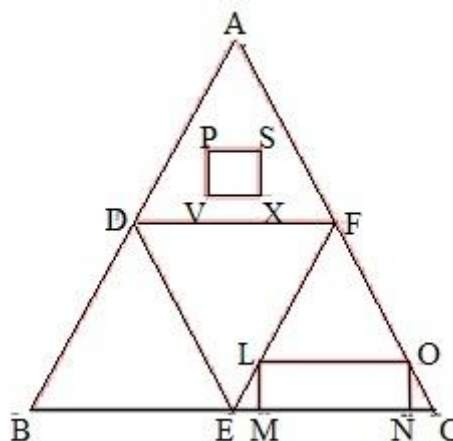
M.M: 80  
Time: 3 hours

**General Instructions:**

- (1) This question paper contains 39 questions.
- (2) This question paper is divided into 4 sections – A, B, C and D.
- (3) In Section-A, Questions 1 – 16 are multiple choice questions (MCQ's) of 1 mark each.
- (4) In Section-B, Questions 17 – 26 are very short- answer (VSA) type questions carrying 2 marks each.
- (5) In Section-C, Questions 27 – 34 are short- answer (SA) type questions carrying 3 marks each.
- (6) In Section-D, Questions 35 – 39 are short- answer (LA) type questions carrying 4 marks each.
- (7) All questions are compulsory. However, an internal choice has been provided in 4 questions in Section- B, 3 questions in Section-C and 2 questions in Section-D.
- (8) Draw neat and clean figures wherever required.

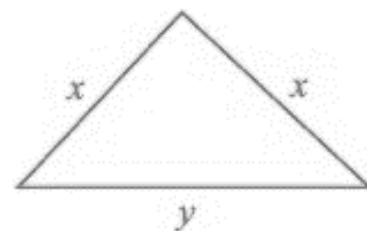
**SECTION-A**

1. A pair of adjacent sides of a quadrilateral  $ABCD$  is \_\_\_\_\_. (1)  
(A)  $\overline{AB}, \overline{CD}$  (B)  $\overline{AC}, \overline{BD}$  (C)  $\overline{AB}, \overline{BC}$  (D)  $\angle A, \angle B$
2. Which of the following pairs is co primes? (1)  
(A) 12, 17 (B) 15, 18 (C) 18, 20 (D) 4, 8
3. Which of the following cannot be the measurements of the three angles of a triangle? (1)  
(A)  $\angle X = 60^\circ, \angle Y = 30^\circ, \angle Z = 100^\circ$  (B)  $\angle R = 71^\circ, \angle S = 30^\circ, \angle T = 79^\circ$   
(C)  $\angle R = 60^\circ, \angle Q = 60^\circ, \angle P = 60^\circ$  (D)  $\angle A = 30^\circ, \angle B = 60^\circ, \angle C = 90^\circ$
4. Which of the following decimals is greater than 0.17? (1)  
(A) 0.0012 (B) 0.0017 (C) 0.017 (D) 0.19
5. Shreeya's present age is  $x$  years. 5 years ago, her age was \_\_\_\_\_ (1)  
(A)  $(5 - x)$  years (B)  $(5 + x)$  years (C)  $(x - 5)$  years (D)  $(x \div 5)$  years
6. The first, second and fourth terms of a proportion are 16, 24 and 54 respectively. The third term is \_\_\_\_\_. (1)  
(A) 32 (B) 48 (C) 28 (D) 36
7. Refer the adjoining figure. One of the quadrilaterals found is trapezium \_\_\_\_\_. (1)



- (A) LONM (B) DFEB (C) DFCB (D) PSXV

8. Which of the following fractions is the greatest? (1)  
 (A)  $\frac{5}{6}$  (B)  $\frac{5}{7}$  (C)  $\frac{5}{9}$  (D)  $\frac{5}{8}$
9. The additive inverse of  $-200$  is \_\_\_\_\_. (1)  
 (A)  $200$  (B)  $0$  (C)  $-199$  (D)  $-201$
10. A room has a perimeter of  $26\text{m}$ . The room is  $10\text{ m}$  long. What is its breadth? (1)  
 (A)  $26\text{ m}$  (B)  $6\text{m}$  (C)  $16\text{m}$  (D)  $3\text{m}$
11. If  $\frac{3}{4}$  is equivalent to  $\frac{x}{20}$ , then the value of  $x$  is \_\_\_\_\_. (1)  
 (A)  $15$  (B)  $18$  (C)  $12$  (D)  $20$
12. A quadrilateral has \_\_\_\_\_ diagonals. (1)  
 (A)  $4$  (B)  $3$  (C)  $2$  (D)  $8$
13. If  $\overline{LM}$  is perpendicular to  $\overline{PQ}$  and intersects it at point  $M$ , then  $\angle LMQ =$  \_\_\_\_\_. (1)  
 (A)  $30^\circ$  (B)  $45^\circ$  (C)  $60^\circ$  (D)  $90^\circ$
14. The perimeter of a triangle shown in figure is \_\_\_\_\_. (1)

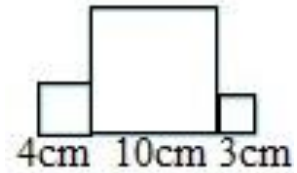


- (A)  $2x + y$  (B)  $x + 2y$  (C)  $x + y$  (D)  $2x - y$
15. A diver is at the depth of  $7\text{m}$  below the sea level and a bird is at a height of  $9\text{ m}$  above the sea level. The total distance between the diver and a bird is \_\_\_\_\_  $\text{m}$ . (1)  
 (A)  $-16$  (B)  $2$  (C)  $16$  (D)  $-2$
16. Identify the twin primes in the following pairs. (1)  
 (A)  $(37, 41)$  (B)  $(17, 19)$  (C)  $(3, 7)$  (D)  $(43, 47)$

### SECTION-B

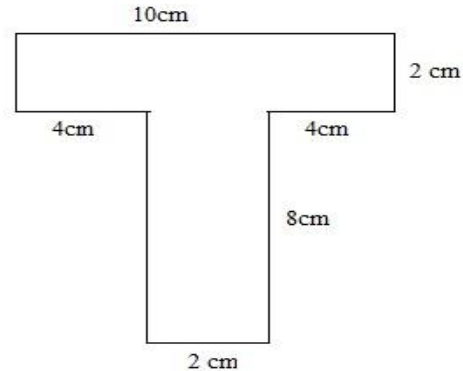
17. (i) A bicycle wheel takes two and a half turns. Find the number of right angles through which it turns. (2)  
 (ii) Name the angle formed by half of a revolution.  
 (iii) Where will the hour hand of a clock stop if it starts at  $2$  and makes one and half revolutions clockwise?  
 (iv) Name the angle made by an hour hand of the clock if it moves from  $5$  to  $7$ .
18. Use the number line to add  $(-8)$  and  $5$ . (2)
19. (A) A brick weighs  $2\frac{1}{5}\text{kg}$ . A stone is  $1\frac{1}{10}\text{kg}$  lighter than a brick. Find the weight of the stone. (2)
- OR**
- (B) Solve:  $2\frac{1}{3} + 1\frac{1}{6}$ .
20. The weight of an empty gas cylinder is  $18\text{ kg } 75\text{ g}$ . The weight of the gas contained in it is  $12\text{ kg } 350\text{ g}$ . What is the total weight of the cylinder filled with gas? (2)

21. (A) Three squares are joined together with sides 4 cm, 10 cm and 3 cm respectively as shown in the adjoining figure. Find the perimeter of the figure. (2)



**OR**

- (B) Find the area of the figure by splitting it into rectangles.



22. Subtract  $2\frac{1}{3}$  from 5. (2)

23. (A) Check the divisibility of 326784 by 6. (2)

**OR**

- (B) Express the following as a sum of two odd primes.  
(i) 64 (ii) 98

24. (A) When Chinmay visited chowpati at Mumbai on a holiday, he observed that the ratio of North Indian food stalls to South Indian food stalls is 5: 4. If the total number of food stalls is 117, find the number of each type of food stalls. (2)

**OR**

- (B) School hours for Foundational Stage is from 9:00 am to 1:00 pm with a lunch break of 30 minutes. What is the ratio of lunch break to the total duration of the school hours?

25. In a village, there are 8 water tanks to collect rain water. On a particular day,  $x$  litres of rain water is collected per tank. If 100 litres of water was already there in one of the tanks, what is the total amount of water in the tanks on that day? (2)

26. Add the successor of -16 to the predecessor of greatest 2 digit number. (2)

### SECTION-C

27. In a shop, there are 3 clocks which chime at intervals of 15, 20 and 30 minutes respectively. They all chime together at 10 am. At what time will they all chime together again? (3)

28. (A) Answer the following questions: (3)

(i) Write  $\frac{3}{4}$  as a fraction with denominator 44.

(ii) Write  $\frac{5}{6}$  as a fraction with numerator 60.

(iii) Grip size of a tennis racket  $11\frac{9}{80}$  cm. Express the size in an improper fraction.

**OR**

- (B) Arrange the following fractions in ascending order:  $\frac{4}{6}$ ,  $\frac{5}{8}$ ,  $\frac{7}{12}$ ,  $\frac{5}{16}$

29. Compute the following: (3)

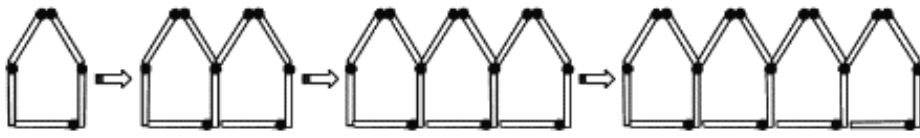
(i)  $(-30) - (-50)$

(ii)  $(-97) + (-50)$

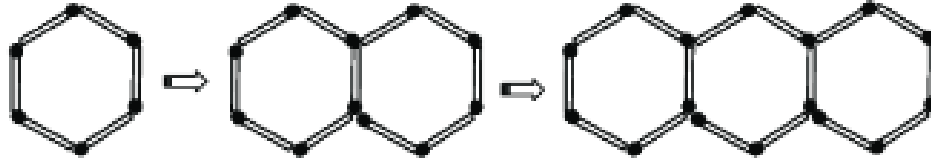
(iii)  $(56) - (-75)$

30. Find the general rule to find the number of matchsticks to be used to get  $n^{\text{th}}$  pattern? (3)

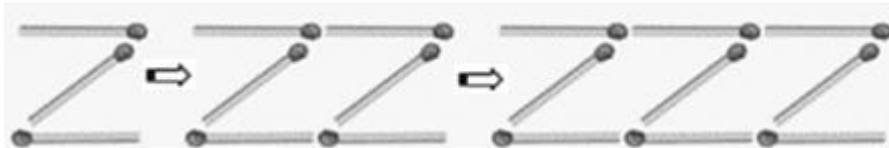
(i)



(ii)



(iii)



31. (A) Write in decimal form: (3)

- The length of Ramesh's notebook is 9 cm 5 mm. What will be its length in cm?
- The height of a sapling is 65 mm. Express its height in cm.
- Rahul bought 4 kg and 960 gm of apples. Express the weight of apples in kg.

OR

- (B) Nirali, Sonali and Vaibhavi bought 8.5 litres, 7.25 litres and 9.4 litres of milk respectively from a milk booth. How much milk did they buy in all? If there were 40 litres of milk in the booth, find the quantity of milk left?

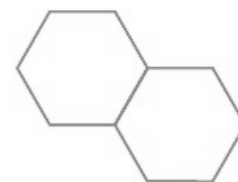
32. Cost of 5 kg of wheat is ₹200. (3)

- What will be the cost of 8 kg of wheat?
- What quantity of wheat can be purchased for ₹80?

33. (A) Sachin wants to cover the floor of a room 16 m long and 15 m wide with rectangular tiles of 2 m long and 1 m wide. Find the number of tiles required to cover the floor. (3)

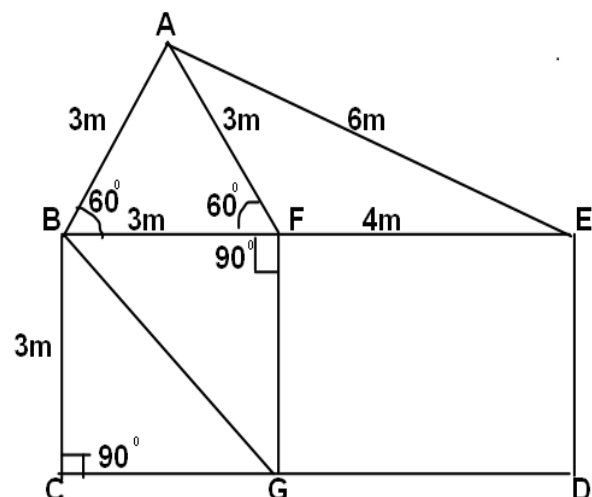
OR

- (B) Two regular hexagons of perimeter 30 cm each are placed as shown in the figure. Find the perimeter of the new shape obtained?



34. Refer the adjoining figure. Identify and name the following triangles by looking at their attributes. (3)

- An equilateral triangle
- A scalene triangle
- An acute angled triangle
- A right-angled triangle
- An obtuse angled triangle
- An isosceles right triangle



### SECTION-D

35. The chart shows the conversion rate of the currencies of five different countries. (4)

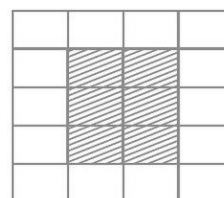
Country	Currency	Value in Indian Rupees
USA	Dollar	85.48
Malaysia	Ringgit	19.12
Germany	Euro	89.27
Saudi Arabia	Riyal	22.76
England	Pound	107.34

Rate on Dec 27, 2024

Based on the above information answer the following questions:

- Which country has the highest exchange rate?
- Which country has the least exchange rate?
- How much more is the US Dollar value as compared to the Malaysia's Ringgit value in Indian rupees?
- Arrange the currencies of the countries mentioned in the above table in descending order.

36. Each tile of dimensions  $40 \text{ cm} \times 60 \text{ cm}$  is arranged to make the adjoining tiling pattern. Find the ratio of area of the shaded portion to the area of the unshaded portion. (4)



37. (A) Three strings of different lengths 2m 40 cm, 3m 18 cm and 4m 26 cm are to be cut into equal lengths. Find the greatest possible length of each piece. (4)

**OR**

- (B) Find the least number which when divided by 60, 120 and 180 leaves a remainder 5 in each case.

38. Write the algebraic expressions for the following: (4)

- The length of a rectangular hall is 4 metres less than 3 times the breadth of the hall. What is its length, if the breadth is  $b$  metres?
- Amoli's father's age is 2 years more than 3 times Amoli's age. If Amoli's present age is  $y$  years, then what is his father's age?
- Sushmita scored 30 marks in Maths,  $x$  marks in Science and  $y$  marks in English. What is her total score in these three subjects?
- John planted  $t$  plants last year. Salim planted 10 more plants than him. Write the expression for the number of plants planted by Salim?

39. (A) Find all the possible dimensions (in natural numbers) of a rectangle whose area is 24 sq. m and find their perimeters (4)

**OR**

- (B) (i) What is the length of the outer boundary of the park shown in the adjoining figure?
- (ii) What will be the total cost of fencing it at the rate of ₹ 20 per meter?
- (iii) There is a rectangular flower bed of dimensions  $100 \text{ m} \times 80 \text{ m}$  in the centre of the park. Find the cost of manuring the flower bed at the rate of ₹ 50 per square meter.

