

SECOND TERM EVALUATION 2024-25

MATHS MODEL QUESTION PAPER 1

Standard: VII

Read the questions carefully.

Attempt any six activities.

All activities carry equal weightage.

Activity 1: Ratio and Proportion

(a) Simplify the following ratios:

(i) 18:24

(ii) 45:75

(b) The ratio of apples to oranges in a basket is 3:5. If there are 15 apples, how many oranges are there?

Activity 2: Algebra

(a) Write the following statements in algebraic form:

(i) A number is divided by 7, and then 9 is added to the result.

(ii) Three times a number is decreased by 8.

(b) Solve for x :

(i) $2x+5=15$

(ii) $3x-4=11$

Activity 3: Geometry

(a) Calculate the area of the rectangles given below:

(i) Length = 12 cm, Breadth = 5 cm.

(ii) Length = 8 cm, Breadth = 4 cm.

(b) A triangle has a base of 10 cm and a height of 6 cm. Find its area.

Activity 4: Powers and Exponents

(a) Express the following as powers of numbers:

(i) $5 \times 5 \times 5 \times 5$

(ii) 7×7

(b) Simplify the following:

(i) $4^3 \div 4^2$

(ii) $2^5 \times 2^3$

Activity 5: Factors

- (a) Find the prime factorization of:
(i) 84
(ii) 90
- (b) Find the Least Common Multiple (LCM) of:
(i) 18 and 24
(ii) 12 and 15

Activity 6: Practical Applications of Ratio

- (a) The ratio of boys to girls in a school is 4:3. If there are 120 boys, how many girls are there?
- (b) To make a fruit salad, the ratio of apples to bananas is 5:2. If you have 25 apples, how many bananas are needed?

Activity 7: Problem Solving

- (a) A rectangular garden has a perimeter of 48 m. The length and breadth are in the ratio 5:3. Find the dimensions and calculate its area.
- (b) A ribbon is cut into three parts in the ratio 2:3:5. If the total length of the ribbon is 30 m, find the length of each part.