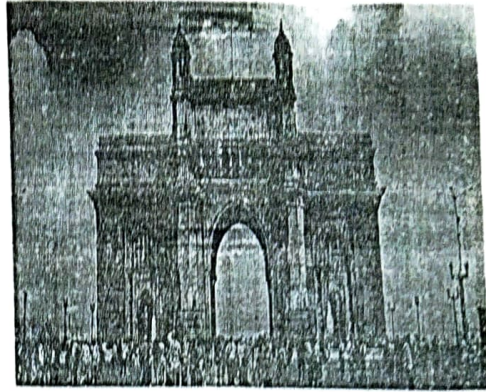
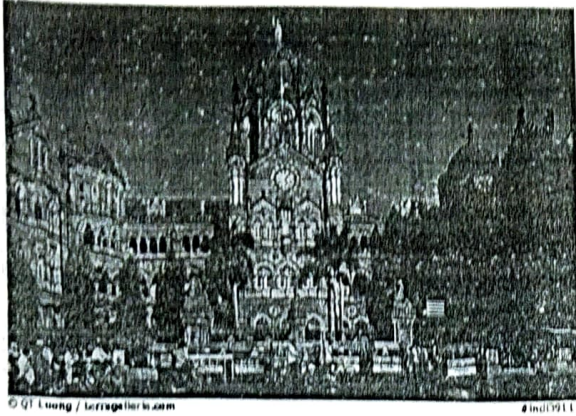


CASE STUDY BASED QUESTION

The students and teachers of a school went for Mumbai sight seeing. All were excited to see the beautiful architecture of the Gateway of India, Flora fountain, Taj Palace hotel, The Victoria Terminus etc. Based on this information, answer the questions given below:



1. How many lines of symmetry can be seen in the Gateway of India?
a) 1 b) 2 c) 3 d) 4
2. Which letter in the word 'INDIA' has no line of symmetry?
a) I b) N c) D d) A
3. Name 2 other monuments which show symmetry.
4. Complete the other symmetrical part of the given figure.



Give answers for the following questions:

1. State the number of lines of symmetry for the following figures:
(a) An equilateral triangle

- (b) An isosceles triangle
- (c) A scalene triangle
- (d) A square
- (e) A rectangle
- (f) A rhombus
- (g) A regular octagon
- (h) A general quadrilateral
- (i) A regular hexagon
- (j) A circle

2. What other name can you give for the line of symmetry of

- (a) an angle
- (b) a circle

3. Draw any two English alphabets having only a vertical line of symmetry.

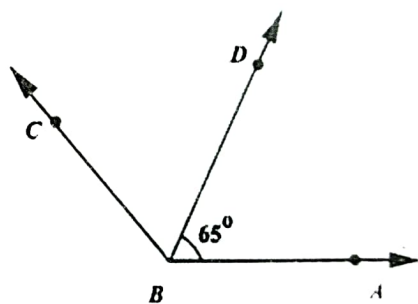
4. Write down all the English Capital Alphabets having no line of symmetry.

5. Draw a line segment of 6cm and show its line of symmetry.

6. Show the lines of symmetry in an equilateral triangle. (Draw the equilateral triangle first)

7. Show the line of symmetry in an angle of measure 60° . (Construct 60° using a protractor)

8. If the ray BD is the angle bisector of $\angle CBA$ in the given figure, what is the measure of $\angle CBD$.



9. How many lines of symmetry are there in a kite? Show the lines of symmetry in a kite by a figure.

10. Explain why a square has 4 lines of symmetry.

11. What is a polygon? Give examples of regular polygons.

12. Draw a rectangle of length 7cm and breadth 4cm. Show its lines of symmetry

DAYANAND ANGLO VEDIC PUBLIC SCHOOL, AIROLI.
CLASS VII SESSION (2024-25) SUBJECT: MATHEMATICS
TOPICS: RATIONAL NUMBERS
OPERATIONS ON RATIONAL NUMBERS(ADDITION)

1. The standard form of $-\frac{32}{40}$ is
 - a) $\frac{-32}{40}$ b) $\frac{-4}{5}$ c) $\frac{4}{-5}$ d) $\frac{32}{-40}$
2. Which of the two rational numbers $\frac{-5}{12}$ and $\frac{7}{-18}$ is smaller?
3. Arrange the following in ascending order:
 $\frac{-7}{9}, \frac{2}{-3}, \frac{5}{6}$
4. Arrange the following in descending order:
 $\frac{-2}{3}, \frac{3}{4}, \frac{5}{-7}$
5. Express the following rational numbers in standard form:
 $\frac{-32}{40}, \frac{18}{-42}, \frac{-552}{216}$
6. Write four equivalent rational numbers for each of the following:
 - a) $\frac{5}{6}$ b) $\frac{-2}{-9}$ c) $\frac{-12}{17}$
7. Find the value of x if the pairs of rational numbers given below are equivalent:
 - a) $\frac{3}{7}, \frac{x}{42}$ b) $\frac{-5}{9}, \frac{10}{x}$
8. Write $-\frac{9}{11}$ as a rational number with (a) numerator -18 (b) denominator -55
9. Represent $\frac{17}{7}$ and $\frac{-17}{7}$ on a number line.
10. Write the following integers as rational numbers.
 - (a) -3 (b) 0 (c) 5
11. Which is greater? $\frac{5}{-8}$ or $\frac{2}{3}$
12. Write the following rational numbers so that they have the same denominator:
 $\frac{3}{40}, \frac{7}{10}, \frac{15}{-80}$

13. Assertion Reasoning question:

Assertion: There are infinitely many rational numbers between any two rational numbers.

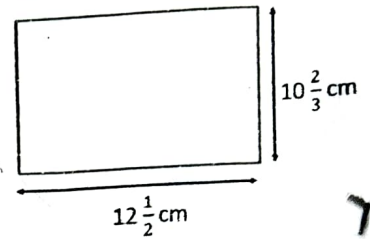
Reason: The sum of 2 rational numbers is always a rational number .

- a) Both A and R are true and R is the correct explanation of A.
- b) Both A and R are true but R is not the correct explanation of A.
- c) A is true but R is false
- d) A is false but R is true.

14. Case study based question:

The breadth of a rectangular sheet of paper is $10\frac{2}{3}$ cm and the length is 12.5 cm.

- 1. Write the measure of the length in standard form.
- 2. Represent the measure of the breadth on a number line.
- 3. Find the perimeter of the rectangular sheet of paper. (by adding 2 lengths and 2 breadths)



15. Add $\frac{-4}{42}$, $\frac{-3}{7}$ and $\frac{2}{-21}$

16. Verify commutative law, given $x = \frac{-8}{9}$, $y = \frac{5}{18}$
