BRAIN INTERNATIONAL SCHOOL

MATHEMATICS ASSIGNMENT **Class -VI** **JULY 2024**

PLAYING WITH NUMBERS

Q-1 Which of the following statements are true? Justify your answer.
(a) 1371 is divisible by 3.
(b) If a number is divisible by 9, it is also divisible by 3.
(c) The sum of any two odd numbers is even.

Q-2. Using the divisibility test, determine which of the following are divisible by 2,3,6,9 and 11:

(a) 2050 (b) 2108

Q-3. What is the LCM of two Co-prime numbers?

Q-4. What is the HCF of two consecutive odd numbers?

Q-5. Find the LCM of 36,60 and 72.

Q-6. Find the HCF of 234 and 572.

Q-7. Three bells toll at intervals of 9, 12 and 15 minutes. If they start tolling together, after what time theywill next toll together?

Q-8. Three boys step off together from the same place. If their steps measure 36cm, 48cm and 54cm, at whatdistance from the starting point will they step together?

Q-9. Determine the smallest 3-digit number which is exactly divisible by 6, 8 and 12.

Q-10 The HCF of two numbers is 18 and their product is 3072. Find the LCM**.**

BASIC GEOMETRICAL IDEAS

Q-1 Draw a rough sketch of closed curve made up of line segments.

Q-2 Fill up the following:

a) _____ has no length, breadth, height or thickness.

b) A line segment has a definite _____ .

c) Curves that do not intersect within themselves are called _____ curves.

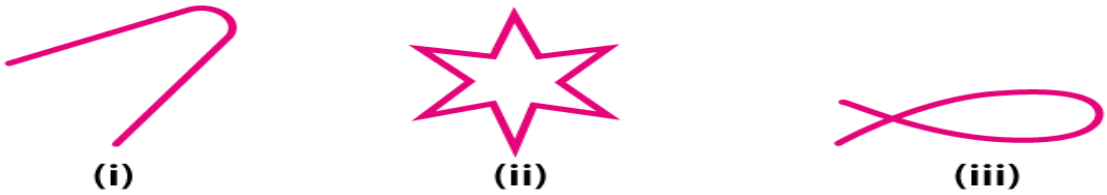
d) An 'angle' is made up of _____ rays having a common endpoint.

Q-3 State which of the following statements are true (T) and which are false (F):

(i) Point has a size because we can see it as a thick dot on paper.
(ii) By lines in geometry, we mean only straight lines.
(iii) Two lines in a plane always intersect in a point.
(iv) Any plane through a vertical line is vertical.

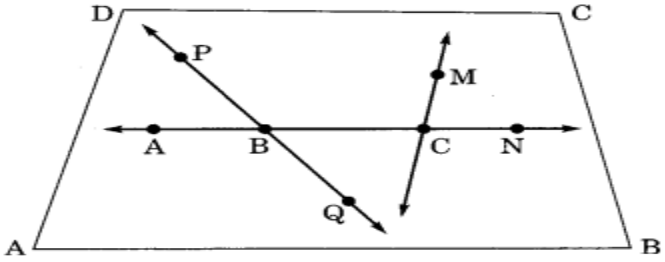
Q-4 Draw a polygon and shade its interior. Also, draw its diagonals, if any.

Q-5 Classify the following curves as open or closed:



Q-6 What is the maximum number of points of intersection of three lines in a plane? What is the minimum number?

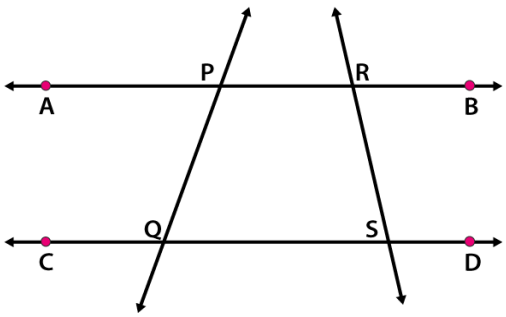
Q-7 Using the given figure, name the following:



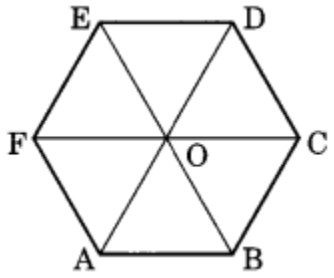
(a) Line containing point M.
(b) Line passing through four points.
(c) Two pairs of intersecting lines.

Q-8 In given figure, name:

(i) Five line segments
(ii) Five rays
(iii) Non-intersecting line segments

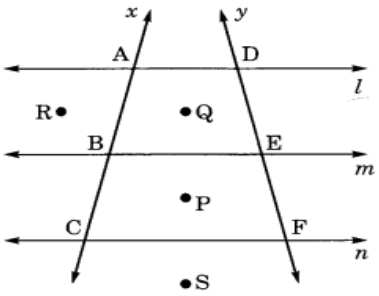


Q-9 Look at the given figure and answer the following:



(a) Name the sides of the polygon ABCDEF.
(b) Name any two pairs of adjacent sides. .
(c) Name all the diagonals of the given polygon.

Q-10 In the given figure, l, m and n are three parallel lines, x and y intersect these lines.



(i) Name the points lying on the line x.
(ii) Name the points inside the quadrilateral ABED.
(iii) Name the lines passing through three points.

ASSERTION AND REASONING

DIRECTION : In the following questions, a statement of **Assertion (A**) is followed by a statement of **Reason (R)** . Choose the correct option.

a) Both Assertion and Reason are true and Reason is a correct explanation of Assertion.
b) Both Assertion and Reason are true and Reason is not a correct explanation of Assertion.
c) Assertion is true but Reason is false.
d) Assertion is false but Reason is true.

Q-1 **Assertion (A)**: 24 is divisible by 6.

Reason(R) : Numbers which are divisible by 2 and 3 , are divisible by 6 also.

Q-2 **Assertion (A)**: The smallest even prime number is 2.

Reason(R): All prime numbers are odd numbers.

Q-3 **Assertion (A)**: LCM is the least among all the common multiples of a number.

Reason(R): HCF stands for highest common factor.

Q-4 **Assertion (A)**: Polygon is a figure made up of line segments and curves.

Reason(R): The smallest polygon is of 3 sides which is triangle.