**ATOMIC ENRGY CENTRAL SCHOOL – 1**

**Anushaktinagar, Mumbai – 400 094**

**Subject: Mathematics Class VI**

**Lesson 4 – Basic Geometrical Concepts**

**WORKSHEET**

***Question 1:*** Match the statements of Column A and Column B correctly.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Column A** |  | **Column B** |
| i) | Line is completely known | a) | may be intersecting or parallel |
| ii) | Two lines in a plane | b) | if they lie on the same plane. |
| iii) | Three non-collinear points | c) | can pass through a point |
| iv) | A plane extends | d) | determine a plane |
| v) | Indefinite number of lines | e) | if two points are given |
| vi) | Points are collinear | f) | indefinitely in all directions |

***Question 2***: How many lines pass through (i) one point (ii) two points?

***Question 3***: Give two examples each of (i) intersecting lines (ii) parallel lines (iii) line segments from your environment.

***Question 4***: ***Write (T) for a true statement and (F) for a false statement***.

1. Point has a size because we can see it as a thick dot on a paper.
2. Two different lines can be drawn passing through two given points.
3. Through a given point, only one line can be drawn.
4. A page of a book is a physical example of plane.
5. An inkpot has both plane and curved surfaces.
6. Two lines in a plane can only be parallel.
7. The maximum number of points of intersection of three lines is three.
8. A line has two end points and a line segment has no end points.

***Question 5***: Look at the figure below. Name all the rays with initial point as A.

C

B

A

Y

X

1. Name all the angles formed in the

Z

X

Y

O

M

figure given below.

1. Draw any polygon and shade its interior.
2. Draw an angle POQ.

Mark (i) a point A in its interior and (ii) a point B in its exterior.

1. Is the given figure quadrilateral ABCD? If not, write the correct name of the quadrilateral. Also write the sides and angles of the quadrilateral.

D

C

A

B

1. **Fill in the blanks**.
2. The vertex of an angle lies \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. The other names for ∠PQR is \_\_\_\_\_\_\_\_\_\_\_
4. The vertex of an angle is always written in the \_\_\_\_\_\_\_
5. A triangle has \_\_\_\_\_ parts.
6. The interior of a triangle does not include its vertices.
7. The vertices of a triangle are three \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ points.
8. Draw a circle with centre O and mark the following using colours:

(a) Diameter AB (b) Radius OP (c) chord CD

(d) segment RS (e) minor arc APB (f) major arc

(g) point Q in the exterior of the circle

(h) point Z in the interior of the circle

1. Is the given figure quadrilateral ABCD? If not, write the correct name of the quadrilateral. Also write the sides and angles of the quadrilateral.

D

C

A

B

1. How many circles can be drawn to pass through two given points?
2. How many circles can be drawn to pass through three given points?
3. **Fill in the blanks**.
4. The diameter of a circle is \_\_\_\_\_\_\_\_\_\_\_ times its radius.
5. The diameter of a circle is the \_\_\_\_\_\_\_\_\_\_\_\_\_ chord of a circle.
6. A radius of a circle is a line segment with one end at \_\_\_\_\_\_\_ and the other end at \_\_\_\_\_\_\_\_\_\_\_\_\_\_
7. Every point on a circle is \_\_\_\_\_\_\_\_\_\_\_\_\_\_ from its centre.
8. A chord of a circle is a line segment with its end points on the \_\_\_\_\_\_\_\_\_
9. The diameter of a circle passes through \_\_\_\_\_\_\_\_\_\_\_\_\_
10. The total number of diameters of a circle are \_\_\_\_\_\_\_\_\_\_\_\_
11. All radii of a circle are \_\_\_\_\_\_\_\_\_\_\_\_