

1. **Objective** : To obtain the conditions for consistency of a system of linear equations in two variables by graphical method.

2. **Objective** : To verify that the given sequence 2,5,8,11,14 is an Arithmetic Progression by paper cutting and pasting method.

2. **Objective** : To verify that the given sequence 3,5,7,9,11 is an Arithmetic Progression by paper cutting and pasting method.

2. **Objective** : To verify that the given sequence 1,4,7,10 is an Arithmetic Progression by paper cutting and pasting method.

3. **Objective**

To verify that the sum of first n natural numbers is $\frac{n(n+1)}{2}$

i.e; $\sum n = \frac{n(n+1)}{2}$, (taking n = 10)

4. *Objective*

To verify that the Basic Proportionality Theorem using parallel line board / Graph papers and triangle cutouts.

5. *Objective*

To derive the section formula; The co-ordinates of the points $P(x, y)$ which divides the line segment joining the points $A(x_1, y_1)$ and $B(x_2, y_2)$ internally in the ratio $m_1 : m_2$ are

$$x = \frac{m_1x_2 + m_2x_1}{m_1 + m_2} \quad \text{and} \quad y = \frac{m_1y_2 + m_2y_1}{m_1 + m_2}$$

6. Objective : To locate the centroid of the triangle graphically and to verify the same using the section formula. Given : $P(2,4)$, $Q(4,12)$ and $R(6, 8)$ as the three vertices of ΔPQR .

7. *Objective*

1. To determine the area of a given cylinder.
2. To obtain the formula for the lateral surface of a right circular cylinder in terms of radius r of its base and height h .

8. Objective

To verify using the method of paper cutting, pasting and folding that the lengths of tangents drawn from an external points are equal.

9. Objective: To give suggestive demonstration of the formula for the curved surface area of cone.

10. Objective:

To give suggestive demonstration of the formula for the volume of a sphere in terms of the radius.

11. Objective : To get familiar with the idea of probability of an event through a double colour card experiment.

12. Objective : To verify the trigonometric identities by cutting and pasting using right angled triangle ABC Right angled at B such that $AB=12\text{cm}$, $BC = 5 \text{ cm}$ and $AC = 13\text{cm}$

12. Objective : To verify the trigonometric identities by cutting and pasting using right angle triangle PQR Right angled at Q with $PQ= 6 \text{ cm}$ $QR= 8 \text{ cm}$ & $PR = 10\text{cm}$.