10/13 11/13 12/19 21 11 41 3|1 2/12 51 41: 3|1

Activity 8

Intercepts of equidistant parallel lines

Objective

To divide a given strip of paper into a specified number of equal parts using a ruled graph paper.

Pre-requisite knowledge

- 1. Measuring length.
- 2. Intercepts of equidistant parallel lines are equal.

Material Required

Coloured paper, a pair of scissors, gum, ruled/graph paper.

Procedure

- 1. Take a strip of paper say 25 cm.
- 2. Practice making two, three and four equal parts of the strip by the method of paper folding.
- 3. To make 7 equal parts
 - a) Take a ruled paper.
 - b) Give numbers (0, 1, 2, ...) to the equidistant parallel lines. [Fig 8 (a)]
 - c) Keep the starting point of the strip on zero and place the end point of the strip on a line numbered 7 or multiple of 7. [Fig 8 (b)]
 - d) As shown in Fig 8 (a), the strip is arranged between 0 and 14, parallel equidistant lines.
 - e) Marking a point on every second line which intersects the strip divides the strip into seven equal parts.
- 4. To make any number of equal parts, repeat the procedure and place the end point of the strip on the equidistant parallel line equal to the number of parts required or a multiple of that number.

Observations

- 1. The students observe that making 2, 3, 4, 5, 6 equal parts is easy by paper folding method.
- 2. To make 7, 11, 13 ... equal parts it is difficult by measuring length and dividing it to given equal parts.
- 3. Students find this activity as an interesting application of the property they have learned in the class.

Learning Outcomes

- 1. Students learn how to divide a strip of paper in any number of equal parts.
- 2. They learn to apply the property of equidistant parallel lines.

Remark

This activity can be extended as follows

- 1. Take 15 equal strips of equal length and breadth.
- 2. Make 2, 3, 4, ... 15 equal parts of these strips by methods explained above.
- 3. Stick them on any cardboard. [Fig 8 (b)]
- 4. This is called as fraction chart.
- 5. Ask students to observe this chart and write their observations.



Fig 8 (a)

1							
1/3					2/3		
1/4			2/4	-	3,	3/4	
	1/5	2	/5	3/5		4/5	
1/6		2/6	3/6		4/6	5/6	
1/7	2/7		3/7	4/7	5/7	6/7	
1/8	2/8	3/8	4/8	5/8	6	/8 7	
1/9	2/9	3/9	4/9	5/9	6/9	7/9	
1/10 2/10 3/10 4/10 5/10 6/10 7/10 8/10							
1/11 2/1	1 3/11	4/11	5/11	6/11 7/1	1 8/11	9/11	
1/12 2/12	3/12	4/12 5	6/12 6/12	7/12 8	8/12 9/1	.2 10/12	
1/13 2/13 3/13 4/13 5/13 6/13 7/13 8/13 9/13 10/13 11/13							
1/14 2/14	3/14 4/14	5/14	6/14 7/14	8/14 9/1	4 10/14	11/14 12/1	
Fig 8 (b)							