# Class 10

MATHEMATICS PROJECT 1st TERM DS

Topic :　　　　　　　To find the height of a tree or building or lamp post from shadow.

Material required: 15cm Scale, 30 cm scale two small sticks or pins as marker.

Procedure:　　　　　Find an open space where clear shadow of any of the above mentioned structure is visible on a sunny day, suitable time morning up to 10A.M or after 3P.M.

Identify the shadow of selected structure and mark its position.

Place the 15cm scale in ground such that it stand vertically and also mark its shadow. Note the height of the scale above ground. Leave it for half an hour or so. Mark the final position of the shadow of both structure and the scale.
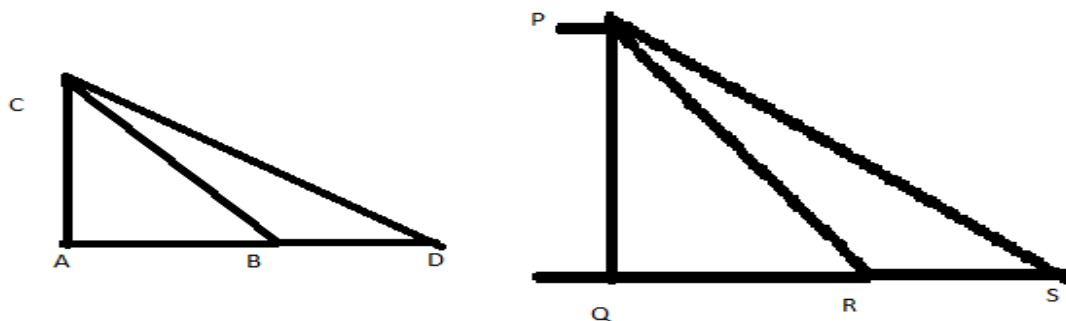
In the above diagram B, D and R,S are respectively initial and final position of the Scale and the structure. Measure AB, AD and RS with help of 30 cm scale.

Calculation:

$$\frac{AB}{QR} = \frac{AD}{QR + RS}$$

Putting the value of AB, AD and RS in the equation QR is found.

Again : $\frac{PQ}{AC} = \frac{QR}{AB}$ Thus PQ can be found.

Last date of submission: AS PER SCHOOL DIARY.

MATHEMATICS PROJECT

CLASS: 9

TOPIC: CALCULATION OF π

STATEMENT: The ratio of the circumference and the diameter of any circle is a constant known as π

OBJECTIVE: To calculate the value of π by activity .

PRE-REQUISITE KNOWLEDGE: knowledge of a circle and terms related to it.

MATERIALS REQUIRED:

1. Geometry box
2. Practical workbook
3. Scissors
4. Scale
5. Sketch pen
6. Adhesives or glue sticks
7. String rolls

PROCEDURE:

1. We are to construct circles of radii 3cm, 4 cm, 5cm, 6 cm, 6.5 cm, 7.2 cm, 8.1 cm respectively on different pages of the practical workbook.
2. Once we complete the diagrams, we roll out a string along the circumference of each of the circles drawn to just cover the boundary.
3. Cut out the string and then measure the length of the string in a metre ruler.
4. Measure the diameter of the corresponding circle.
5. Now calculate the ratio of the length of the circumference and the diameter upto 8 decimal places.
6. Find out the mean or average of all the values of π hence calculated.
7. Hence sate your conclusion.

Class 9

MATHEMATICS PROJECT 1st TERM DS

Project 2

1. Collect the weights of 40 students of your class.
2. Make frequency distribution table with 5 classes with suitable range for the data collected with tally marks.
3. Plot frequency polygon and histogram of the collected data.