

"Teaching innovatively (with focus on ICT) and its impact on the quality of education"

Teaching activity n°1

Title	GRADIENT OF THE STRAIGHT LINE
Nation	ITALY
Subject	Mathematics

LEARNING OBJECTIVES

- > Understand the concept of gradient of a straight line in Cartesian coordinates.
- > Derive the formula for the gradient of a straight line.
- Calculate the gradient of the straight line passing through two points.
- ➤ (Geo-Gebra)

PREVIOUS KNOWLEDGE

Student have known:

- > Understand the concept of gradient of a straight line.
- > Determine vertical and horizontal distances between two given points.
- > Determine the ratio of vertical displacement to horizontal displacement.
- Complete a right angle triangle.
- > How to find the coordinate of a point in Cartesian coordinates.

THINKING SKILLS

✤ Inferences, reflection and inductive thinking.

ORGANIZATION OF ACTIVITY



	a) What is the coordinate of point P?b) What is the coordinate of point Q?
	c) What is the gradient of PQ?
	 1) Teacher asks students to state the vertical and horizontal displacement.
Step 3	
	coordinate
	 Teacher asks the students to group 4 person each for Co-operative learning structures .
	 Teacher gives a worksheet "Geogebra activity" to find out the gradient of a straight line using software Geogebra
	• Teacher allows student to make discussion in group.
	 Teacher asks the student to make a generalization of the formula for the gradient of a straight line according to the worksheet.
	Summarize the lesson : Conclude what the student have learned from this lesson. The formula for the gradient of a straight line in Cartesian coordinate is
	$m = \frac{y_2 - y_1}{x_2 - x_1}$
	or use
	$= \frac{y_1 - y_2}{x_1 - x_2}$
Step 4	WRITING TEST