

MATHEMATICS PRACTICAL EXAMINATION

Practical Activity: Relation and Function

Question

Using the **paper cut-and-paste method**, distinguish between a **relation** and a **function**. Represent the concepts clearly and demonstrate the difference between them using suitable examples.

Objectives

- To understand the concepts of a **relation** and a **function**.
- To identify the difference between a relation and a function.
- To represent relations and functions visually using paper cut-outs.
- To verify that every function is a relation, but every relation need not be a function.
- To develop creativity, accuracy and presentation skills.

Materials Required

• Coloured paper/chart paper • Scissors • Glue • Sketch pens/markers • Ruler • A4 sheet or practical notebook

Observation

- A **relation** may associate one element of the first set with one or more elements of the second set, or with none.
- In a **function**, every element of the first set (domain) must be associated with **exactly one** element of the second set (codomain).
- Therefore, a function satisfies the condition that **each input has exactly one output**.

Conclusion

A **function is a special type of relation** in which every element of the domain has exactly one image in the codomain.

Every function is a relation, but every relation is not necessarily a function.

Marks Distribution

Component	Marks
Objectives	1
Correct paper cut-and-paste representation	3
Observation	2
Conclusion	1
Accuracy and clarity	1
Neat, clean and decorative presentation (Extra)	2 (Extra)
Total	10

Note: Extra marks will be awarded for a **neat, clean, well-organised and decorative presentation** of the practical work.