



Multiple representations of algebraic relationships

Introduction

Remind the students of the graphs they have worked with, asking them what kind of graphs they know. Depending on the class and their recent experience, there are several points you might like to make, such as (these are some examples):

- A graph is an infinite set of points in the Cartesian plane.
- Each point can be described by an ordered pair, which is constructed according to some rule.
- The rule can be expressed as an equation.

Show the students the eight big cards for modelling. Model how the cards can be arranged into two groups, each representing the same relationship in different ways. Point out that the rule card is empty for the relationship y = 3x + 2. Discuss together what should be written on the card.

Card matching activity

Put the learners into pairs. Each group should have:

- five set of cards (rule, graph, table, equation, name)
- a large sheet of paper
- glue or prestik.

Explain that they should group together the cards that relate to the same algebraic relationship. Each group should have one of each type of card. Sometimes they will have to add content to a blank card.

Allow them enough time to do the activity.

Try not to tell them the answers, just listen to what they are saying. This will help you decide what questions to ask them in order to help them think about different approaches (such as finding matching tables by reading points off a graph).

Discussion

Have all the graph cards up on the board. Ask learners to come up and find matching cards and to stick these alongside (or under) the graph cards. Alternatively, hand out a big card to each pair and ask them to stick the card alongside (or under) the correct graph.

Keeping a record

Give each student a record sheet. Explain that the graph and the table are given, and they should write in the rule, equation and name of the graph. This can be done during the discussion. These record sheets can then be stuck in the students' books.