

Strategies to approach mathematical problems

Strategies to approach mathematical problems include:

- Working backwards
- Acting out the problem
- Making a table or list
- Looking for a pattern
- Drawing a diagram or graph
- Using smaller numbers
- Guessing and checking
- Using materials
- Thinking of a similar problem

Strategies are an important part of the problem-solving process and students need to know a wide range of strategies and how to access them. However, they are only useful once the nature of the problem has been established. Many problems can be solved in a variety of ways using different strategies. How a teacher might solve a problem can be contrary to how a student might solve the same problem. Imposing a teacher's strategy on the student usually only serves to teach that one problem as the strategy is not one which the student would have selected and therefore does not necessarily make sense to the student. Encouraging a class to solve a problem in a variety of ways and then discussing and justifying the different approaches gives access to many strategies and exposes students to a variety of different mathematical thinking.

Extract from *Teaching Primary Mathematics* Page 43-44, G. Booker, D Bond, J Briggs, G Davey, Longman, 1997