3   The modelling cycle: questions to ask yourself

Situation

Simplify and represent

• What exactly is the problem? Can I say it clearly?
• What do I know, and what do I need to find out?
• Can I make the problem a bit simpler?
• What assumptions can I make?
• What bit of maths might help me?

Mathematical model

Analyse and solve

• Have I seen something like this before?
• Is there a diagram that I could draw?
• What is fixed, and what can I change?
• Can I do this in an organised way?
• How can I keep a record of what I am doing?
• Can I see any patterns or relationships?
• Will this pattern always work? How can I be sure?

A solution to the problem

Interpret and evaluate

• What conclusions can I draw?
• How can I check my work?
• Are my conclusions reasonable?
Is my solution good enough?

NO

YES

Communicate and reflect

• What is the best way to show my work to others?
• Looking back, was there a better way to do it?
• Will this work be useful for other problems?

Report