

## iMaths 1 Problem Solving reference sheet

This reference sheet lists the Topics from iMaths 1 that include a Problem Solving task and the strategies used to solve them. The grid shows the suggested key strategy as well as other strategies that students might use to solve the task.

### Key:

- Key strategies used to solve the task
- Supporting strategies used to solve the task

### NA1 Count in ones

1	Guess and check	6	Check for useful information
2	Make a table or chart	7	Find smaller parts of a big problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern	10	Work backwards

### NA2 Count in twos

1	Guess and check	6	Check for useful information
2	Make a table or chart	7	Find smaller parts of a big problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern	10	Work backwards

### NA3 Count in fives

1	Guess and check	6	Check for useful information
2	Make a table or chart	7	Find smaller parts of a big problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern	10	Work backwards

### NA7 Tens and ones (place value)

1	Guess and check	6	Check for useful information
2	Make a table or chart	7	Find smaller parts of a big problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern	10	Work backwards

### NA9 One more, one less, ten more, ten less

1	Guess and check	6	Check for useful information
2	Make a table or chart	7	Find smaller parts of a big problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern	10	Work backwards

### NA14 Turnarounds

1	Guess and check	6	Check for useful information
2	Make a table or chart	7	Find smaller parts of a big problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern	10	Work backwards

**NA15** Addition facts

1	Guess and check	6	Check for useful information
2	Make a table or chart	7	Find smaller parts of a big problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern	10	Work backwards

**NA16** Addition to two digits

1	Guess and check	6	Check for useful information
2	Make a table or chart	7	Find smaller parts of a big problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern	10	Work backwards

**NA20** First subtraction facts

1	Guess and check	6	Check for useful information
2	Make a table or chart	7	Find smaller parts of a big problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern	10	Work backwards

**NA26** Division

1	Guess and check	6	Check for useful information
2	Make a table or chart	7	Find smaller parts of a big problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern	10	Work backwards

**NA29** Big coins, little coins

1	Guess and check	6	Check for useful information
2	Make a table or chart	7	Find smaller parts of a big problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern	10	Work backwards

**MG2** How long is a metre?

1	Guess and check	6	Check for useful information
2	Make a table or chart	7	Find smaller parts of a big problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern	10	Work backwards

**MG3** How much does it hold?

1	Guess and check	6	Check for useful information
2	Make a table or chart	7	Find smaller parts of a big problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern	10	Work backwards

**MG9** Calendars and months

1	Guess and check	6	Check for useful information
2	Make a table or chart	7	Find smaller parts of a big problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern	10	Work backwards

**MG11** Which 2D shape is that?

1	Guess and check	6	Check for useful information
2	Make a table or chart	7	Find smaller parts of a big problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern	10	Work backwards

**MG12** Sort 3D objects

1	Guess and check	6	Check for useful information
2	Make a table or chart	7	Find smaller parts of a big problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern	10	Work backwards

**MG13** Classify 3D objects

1	Guess and check	6	Check for useful information
2	Make a table or chart	7	Find smaller parts of a big problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern	10	Work backwards

**MG14** In front, behind, between

1	Guess and check	6	Check for useful information
2	Make a table or chart	7	Find smaller parts of a big problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern	10	Work backwards

**SP7** Birthday graphs

1	Guess and check	6	Check for useful information
2	Make a table or chart	7	Find smaller parts of a big problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern	10	Work backwards

**SP8** Class height graph

1	Guess and check	6	Check for useful information
2	Make a table or chart	7	Find smaller parts of a big problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern	10	Work backwards

## iMaths 2 Problem Solving reference sheet

This reference sheet lists the Topics from iMaths 2 that include a Problem Solving task and the strategies used to solve them. The grid shows the suggested key strategy as well as other strategies that students might use to solve the task.

### Key:

- Key strategies used to solve the task
- Supporting strategies used to solve the task

### NA5 Number lines to 1000

1	Guess and check	6	Check for useful information
2	Make a table or chart	7	Find smaller parts of a big problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern	10	Work backwards

### NA12 Written strategies for addition

1	Guess and check	6	Check for useful information
2	Make a table or chart	7	Find smaller parts of a big problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern	10	Work backwards

### NA16 Backtracking

1	Guess and check	6	Check for useful information
2	Make a table or chart	7	Find smaller parts of a big problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern	10	Work backwards

### NA18 Multiplication

1	Guess and check	6	Check for useful information
2	Make a table or chart	7	Find smaller parts of a big problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern	10	Work backwards

### NA22 Models and symbols for fractions

1	Guess and check	6	Check for useful information
2	Make a table or chart	7	Find smaller parts of a big problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern	10	Work backwards

### NA24 Make a \$1 total

1	Guess and check	6	Check for useful information
2	Make a table or chart	7	Find smaller parts of a big problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern	10	Work backwards

**NA25** Coins and notes

1	Guess and check	6	Check for useful information
2	Make a table or chart	7	Find smaller parts of a big problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern	10	Work backwards

**NA26** Comparing coins

1	Guess and check	6	Check for useful information
2	Make a table or chart	7	Find smaller parts of a big problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern	10	Work backwards

**MG12** Construct 2D shapes

1	Guess and check	6	Check for useful information
2	Make a table or chart	7	Find smaller parts of a big problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern	10	Work backwards

**MG13** Classify 3D objects

1	Guess and check	6	Check for useful information
2	Make a table or chart	7	Find smaller parts of a big problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern	10	Work backwards

**MG14** Making 3D objects

1	Guess and check	6	Check for useful information
2	Make a table or chart	7	Find smaller parts of a big problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern	10	Work backwards

**MG19** Map references

1	Guess and check	6	Check for useful information
2	Make a table or chart	7	Find smaller parts of a big problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern	10	Work backwards

## iMaths 3 Problem Solving reference sheet

This reference sheet lists the Topics from iMaths 3 that include a Problem Solving task and the strategies used to solve them. The grid shows the suggested key strategy as well as other strategies that students might use to solve the task.

### Key:

- Key strategies used to solve the task
- Supporting strategies used to solve the task

### NA1 Odd and even

1	Guess and check	6	Check for relevant or irrelevant information
2	Make a table or chart	7	Find smaller parts of a large problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern or use a rule	10	Work backwards

### NA3 Place value to ten thousands

1	Guess and check	6	Check for relevant or irrelevant information
2	Make a table or chart	7	Find smaller parts of a large problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern or use a rule	10	Work backwards

### NA10 Written strategies for addition

1	Guess and check	6	Check for relevant or irrelevant information
2	Make a table or chart	7	Find smaller parts of a large problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern or use a rule	10	Work backwards

### NA12 Written strategies for subtraction

1	Guess and check	6	Check for relevant or irrelevant information
2	Make a table or chart	7	Find smaller parts of a large problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern or use a rule	10	Work backwards

### NA13 Subtraction to three digits

1	Guess and check	6	Check for relevant or irrelevant information
2	Make a table or chart	7	Find smaller parts of a large problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern or use a rule	10	Work backwards

### NA17 Multiply by 10

1	Guess and check	6	Check for relevant or irrelevant information
2	Make a table or chart	7	Find smaller parts of a large problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern or use a rule	10	Work backwards

**NA19** Division facts 2, 3

1	Guess and check	6	Check for relevant or irrelevant information
2	Make a table or chart	7	Find smaller parts of a large problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern or use a rule	10	Work backwards

**NA20** Division facts 5, 10

1	Guess and check	6	Check for relevant or irrelevant information
2	Make a table or chart	7	Find smaller parts of a large problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern or use a rule	10	Work backwards

**NA25** Multiplication 2-digit x 1-digit (with regrouping)

1	Guess and check	6	Check for relevant or irrelevant information
2	Make a table or chart	7	Find smaller parts of a large problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern or use a rule	10	Work backwards

**NA32** Giving change

1	Guess and check	6	Check for relevant or irrelevant information
2	Make a table or chart	7	Find smaller parts of a large problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern or use a rule	10	Work backwards

**MG1** Measurement with metres

1	Guess and check	6	Check for relevant or irrelevant information
2	Make a table or chart	7	Find smaller parts of a large problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern or use a rule	10	Work backwards

**MG8** Seconds, minutes, hours, days

1	Guess and check	6	Check for relevant or irrelevant information
2	Make a table or chart	7	Find smaller parts of a large problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern or use a rule	10	Work backwards



**MG11** 3D objects

1	Guess and check	6	Check for relevant or irrelevant information
2	Make a table or chart	7	Find smaller parts of a large problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern or use a rule	10	Work backwards

**SP4** Picture graphs

1	Guess and check	6	Check for relevant or irrelevant information
2	Make a table or chart	7	Find smaller parts of a large problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern or use a rule	10	Work backwards

## iMaths 4 Problem Solving reference sheet

This reference sheet lists the Topics from iMaths 4 that include a Problem Solving task and the strategies used to solve them. The grid shows the suggested key strategy as well as other strategies that students might use to solve the task.

### Key:

- Key strategies used to solve the task
- Supporting strategies used to solve the task

### NA5 Multiples 3, 4, 5, 6, 7, 8, 9

1	Guess and check	6	Check for relevant or irrelevant information
2	Make a table or chart	7	Find smaller parts of a large problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern or use a rule	10	Work backwards

### NA6 Multiplication facts 2, 3, 5, 10

1	Guess and check	6	Check for relevant or irrelevant information
2	Make a table or chart	7	Find smaller parts of a large problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern or use a rule	10	Work backwards

### NA7 Multiplication facts 4, 6, 8, 9

1	Guess and check	6	Check for relevant or irrelevant information
2	Make a table or chart	7	Find smaller parts of a large problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern or use a rule	10	Work backwards

### NA11 Division problem solving

1	Guess and check	6	Check for relevant or irrelevant information
2	Make a table or chart	7	Find smaller parts of a large problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern or use a rule	10	Work backwards

### NA12 Backtracking

1	Guess and check	6	Check for relevant or irrelevant information
2	Make a table or chart	7	Find smaller parts of a large problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern or use a rule	10	Work backwards

### NA17 Multiplication 3-digit x 1-digit

1	Guess and check	6	Check for relevant or irrelevant information
2	Make a table or chart	7	Find smaller parts of a large problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern or use a rule	10	Work backwards

**NA23** Equivalent fractions

1	Guess and check	6	Check for relevant or irrelevant information
2	Make a table or chart	7	Find smaller parts of a large problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern or use a rule	10	Work backwards

**NA32** Purchases and giving change

1	Guess and check	6	Check for relevant or irrelevant information
2	Make a table or chart	7	Find smaller parts of a large problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern or use a rule	10	Work backwards

**NA33** Investigating patterns

1	Guess and check	6	Check for relevant or irrelevant information
2	Make a table or chart	7	Find smaller parts of a large problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern or use a rule	10	Work backwards

**NA35** Equivalent number sentences

1	Guess and check	6	Check for relevant or irrelevant information
2	Make a table or chart	7	Find smaller parts of a large problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern or use a rule	10	Work backwards

**MG1** Graduated scales

1	Guess and check	6	Check for relevant or irrelevant information
2	Make a table or chart	7	Find smaller parts of a large problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern or use a rule	10	Work backwards

**MG4** Perimeter

1	Guess and check	6	Check for relevant or irrelevant information
2	Make a table or chart	7	Find smaller parts of a large problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern or use a rule	10	Work backwards

**MG6** Litres and millilitres

1	Guess and check	6	Check for relevant or irrelevant information
2	Make a table or chart	7	Find smaller parts of a large problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern or use a rule	10	Work backwards

**MG7** Volume

1	Guess and check	6	Check for relevant or irrelevant information
2	Make a table or chart	7	Find smaller parts of a large problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern or use a rule	10	Work backwards

**MG9** Read and interpret timetables

1	Guess and check	6	Check for relevant or irrelevant information
2	Make a table or chart	7	Find smaller parts of a large problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern or use a rule	10	Work backwards

**SP2** Judgments

1	Guess and check	6	Check for relevant or irrelevant information
2	Make a table or chart	7	Find smaller parts of a large problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern or use a rule	10	Work backwards

## iMaths 5 Problem Solving reference sheet

This reference sheet lists the Topics from iMaths 5 that include a Problem Solving task and the strategies used to solve them. The grid shows the suggested key strategy as well as other strategies that students might use to solve the task.

### Key:

- Key strategies used to solve the task
- Supporting strategies used to solve the task

### NA2 Factor trees

1	Guess and check	6	Check for relevant or irrelevant information
2	Make a table or chart	7	Find smaller parts of a large problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern or use a rule	10	Work backwards

### NA5 Place value beyond millions

1	Guess and check	6	Check for relevant or irrelevant information
2	Make a table or chart	7	Find smaller parts of a large problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern or use a rule	10	Work backwards

### NA7 Multiplication 3-digit x 2-digit

1	Guess and check	6	Check for relevant or irrelevant information
2	Make a table or chart	7	Find smaller parts of a large problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern or use a rule	10	Work backwards

### NA9 Division 3-digit ÷ 1-digit

1	Guess and check	6	Check for relevant or irrelevant information
2	Make a table or chart	7	Find smaller parts of a large problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern or use a rule	10	Work backwards

### NA11 Division with remainders

1	Guess and check	6	Check for relevant or irrelevant information
2	Make a table or chart	7	Find smaller parts of a large problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern or use a rule	10	Work backwards

### NA13 Equivalent fractions

1	Guess and check	6	Check for relevant or irrelevant information
2	Make a table or chart	7	Find smaller parts of a large problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern or use a rule	10	Work backwards

**NA17** Expanded notation

1	Guess and check	6	Check for relevant or irrelevant information
2	Make a table or chart	7	Find smaller parts of a large problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern or use a rule	10	Work backwards

**NA18** Decimal addition to tenths

1	Guess and check	6	Check for relevant or irrelevant information
2	Make a table or chart	7	Find smaller parts of a large problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern or use a rule	10	Work backwards

**NA20** Decimal subtraction to tenths

1	Guess and check	6	Check for relevant or irrelevant information
2	Make a table or chart	7	Find smaller parts of a large problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern or use a rule	10	Work backwards

**NA22** Percentages

1	Guess and check	6	Check for relevant or irrelevant information
2	Make a table or chart	7	Find smaller parts of a large problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern or use a rule	10	Work backwards

**MG4** Perimeter of rectangles**PS task 1** Anika's Animal Nursery

1	Guess and check	6	Check for relevant or irrelevant information
2	Make a table or chart	7	Find smaller parts of a large problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern or use a rule	10	Work backwards

**MG4** Perimeter of rectangles**PS task 2** Soccer field

1	Guess and check	6	Check for relevant or irrelevant information
2	Make a table or chart	7	Find smaller parts of a large problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern or use a rule	10	Work backwards

**MG7** Read and interpret timetables

1	Guess and check	6	Check for relevant or irrelevant information
2	Make a table or chart	7	Find smaller parts of a large problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern or use a rule	10	Work backwards

**MG8** Australian time zones

1	Guess and check	6	Check for relevant or irrelevant information
2	Make a table or chart	7	Find smaller parts of a large problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern or use a rule	10	Work backwards

**MG14** Directions, turns and degrees

1	Guess and check	6	Check for relevant or irrelevant information
2	Make a table or chart	7	Find smaller parts of a large problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern or use a rule	10	Work backwards

**MG17** Flip, slide, turn

1	Guess and check	6	Check for relevant or irrelevant information
2	Make a table or chart	7	Find smaller parts of a large problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern or use a rule	10	Work backwards

## iMaths 6 Problem Solving reference sheet

This reference sheet lists the Topics from iMaths 6 that include a Problem Solving task and the strategies used to solve them. The grid shows the suggested key strategy as well as other strategies that students might use to solve the task.

### Key:

- Key strategies used to solve the task
- Supporting strategies used to solve the task

### NA2 Square and triangular numbers

1	Guess and check	6	Check for relevant or irrelevant information
2	Make a table or chart	7	Find smaller parts of a large problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern or use a rule	10	Work backwards

### NA4 Multiplication by two digits

1	Guess and check	6	Check for relevant or irrelevant information
2	Make a table or chart	7	Find smaller parts of a large problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern or use a rule	10	Work backwards

### NA8 Backtracking

1	Guess and check	6	Check for relevant or irrelevant information
2	Make a table or chart	7	Find smaller parts of a large problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern or use a rule	10	Work backwards

### NA10 Estimation strategies

1	Guess and check	6	Check for relevant or irrelevant information
2	Make a table or chart	7	Find smaller parts of a large problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern or use a rule	10	Work backwards

### NA15 Decimal addition and subtraction

1	Guess and check	6	Check for relevant or irrelevant information
2	Make a table or chart	7	Find smaller parts of a large problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern or use a rule	10	Work backwards

### NA20 Renaming percents as fractions

1	Guess and check	6	Check for relevant or irrelevant information
2	Make a table or chart	7	Find smaller parts of a large problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern or use a rule	10	Work backwards



**NA23** Patterns and general rules

1	Guess and check	6	Check for relevant or irrelevant information
2	Make a table or chart	7	Find smaller parts of a large problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern or use a rule	10	Work backwards

**MG1** Metric system of measurement

1	Guess and check	6	Check for relevant or irrelevant information
2	Make a table or chart	7	Find smaller parts of a large problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern or use a rule	10	Work backwards

**MG3** Area of composite rectangles

1	Guess and check	6	Check for relevant or irrelevant information
2	Make a table or chart	7	Find smaller parts of a large problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern or use a rule	10	Work backwards

**MG5** Packing and stacking

1	Guess and check	6	Check for relevant or irrelevant information
2	Make a table or chart	7	Find smaller parts of a large problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern or use a rule	10	Work backwards

**MG9** International time zones

1	Guess and check	6	Check for relevant or irrelevant information
2	Make a table or chart	7	Find smaller parts of a large problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern or use a rule	10	Work backwards

**MG13** Measure angles  $0^\circ$ – $360^\circ$ 

1	Guess and check	6	Check for relevant or irrelevant information
2	Make a table or chart	7	Find smaller parts of a large problem
3	Draw a picture or diagram	8	Make an organised list
4	Act out the problem	9	Solve a simpler problem
5	Find a pattern or use a rule	10	Work backwards