

## How many ways can you make 1000 using only eight 8s?

### Teachers' Notes

#### Curriculum Links and Background:

This is a “puzzle” task that requires students to work with their understanding of operations and the order of operations. It is accessible to students working at Level 3 (see the repeated addition solution). However the challenge to find several solutions will require students to apply their understanding of the order of operations and working with decimals and fractions which more closely aligns with Level 4 and 5 Number and Algebra.

This task is similar to the more famous “Four 4s” problem

([http://en.wikipedia.org/wiki/Four\\_fours](http://en.wikipedia.org/wiki/Four_fours)) which can be extended to look at other sets of numbers (ten 10s, five 5s, etc).

#### Suggestions:

Some possible solutions:

- $888 + 88 + 8 + 8 + 8$
- $(8(8(8+8)-(8+8)/8))-8$
- $8888/8.888$
- $(888-8) + 8 \times (8+8) - 8$
- $((8 \times (8+8)) - ((8+8+8)/8)) \times 8$
- $((8 \times (8+8)) - ((88/8) - 8)) \times 8$
- $(8888 - 888)/8$
- $8(8 \times 8 + 8 \times 8) - 8 - 8 - 8$

The following is a link to an Order of Operations game that can be used for practice.

<http://www.nzmaths.co.nz/resource/operations-checker>