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## An algorithm to perform the order of operations

Provide students with opportunities to learn about the order of operations and be familiar with the standard order of steps to solve these types of equations.
Set the task of breaking down the process into small steps so a computer (or robot) will be able to follow.

## Differentiation

- Provide the steps printed out and cut into strips for students to move into place.
- Some students may require the algorithm to follow and not yet be at the stage to create their own. Provide examples of expressions for students to test and follow the algorithm. For these students provide this algorithm as an example.

Calculate expressions using 'order of operations'
Are there brackets in the expression?
If Yes Do what is inside the brackets first
Go to line 1
If No Are there any multiplications or
divisions not done?
If Yes Multiply or divide in the order they come from left to right

Go to line 4
If No
Are there any additions or subtractions not done?
If Yes Add or subtract in the order they come, from left to right

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## Steps: order of operations

Cut these steps into strips and organise into a series of steps to perform the order of operations.
Number each step starting at 1.

Multiply or divide in the order they come from left to right

Do what is inside the brackets first

Are there any addition or subtraction not done?

Are there any multiplication or division not done?

Are there brackets in the expression?

Stop. Print the answer.

Add or subtract in the order they come from left to right

Use these after a question (decision)

| If Yes | If Yes | If Yes | If No | If No | If No |
| :---: | :---: | :---: | :---: | :---: | :---: |

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Create a card to go back or move to a particular step.

Go to line $\square$

