# Backus-Naur Form

Below you will see some production rules that have been used to define the syntax of valid mathematical expressions in a particular programming language.

1. What notation method has been used in the production rules above?

Backus-Naur Form

1. Complete the following Table Stating whether the string is valid for the production rule type.

|  |  |  |
| --- | --- | --- |
| Statement Type | String | Valid (Yes/No) |
| <number> | 42 | Yes |
| <number> | 42.5 | No |
| <factor> | 12 \* 13 | No |
| <factor> | 12 + 13 | Yes |
| <expression> | -12 | Yes |

1. On paper draw the syntax diagram for the first 4 production rules. You don’t need to define the <digit> production rule as its on the slides.

EXTENSION:

1. How could you extend the expressions you’ve generated to allow decimal numbers?
2. Can you add more operators e.g. ^ for power of. Think about how you can ensure that they follow the rules of BIDMAS