# 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?
2. Complete the following Table Stating whether the string is valid for the production rule type.

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

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