

```
@startuml
title Function Class and Nodes
```

```
Function o-- Node
```

```
Node j-- BinaryOperator
Node j-- UnaryOperator
Node j-- N_aryOperator
Node <| -- Symbol
```

```
N_aryOperator <| -- Plus
N_aryOperator <| -- Minus
N_aryOperator <| -- Times
BinaryOperator <| -- Divide
UnaryOperator <| -- Negate
UnaryOperator <| -- Exp
UnaryOperator <| -- Log
UnaryOperator <| -- Sine
UnaryOperator <| -- Cosine
N_aryOperator <| -- UserDefined
```

```
Symbol <| -- Variable
Symbol <| -- PathVariable
Symbol <| -- Coefficient
```

```
interface Node is allow empty instantiation? this might be achieved by pure virtualism -- public -- + abstract
```

```
interface BinaryOperator -- public -- virtual addLeaf(Node * leaf) -- private -- Node * leftnode_N
```