Grammar

Expression -> Term

- **Expression -> Term AddOp Expression**
- **Term -> Factor**
- **Term -> Factor MulOp Term**
- **Factor -> Primary**
- **Factor -> Primary ExpOp Factor**
- **Primary -> Number**
- **Primary -> (Expression)**
- **AddOp -> +**
- **AddOp -> -**
- **MulOp -> ***
- **MulOp -> /**
- **ExpOp -> ^**
- **Number -> Digit**
- **Number -> Digit Number**
- **Digit -> 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9**

Explanation

1. **Expression -> Term AddOp Expression**: An expression can be a term followed by an addition operator (+ or -) followed by another expression.
2. **Term -> Factor**: A term can be simply a factor.
3. **Term -> Factor MulOp Term**: Alternatively, a term can be a factor followed by a multiplication operator (*) or division operator (/) followed by another term.
4. **Factor -> Primary**: A factor can be a primary expression.
5. **Factor -> Primary ExpOp Factor**: Alternatively, a factor can be a primary expression followed by an exponentiation operator (^) followed by another factor.
6. **Primary -> Number**: A primary expression can be a number.

7. **Primary -> (Expression)**: Alternatively, a primary expression can be an expression enclosed in parentheses.
8. **AddOp -> +**: An addition operator can be a plus sign (+).
9. **AddOp -> -**: Alternatively, it can be a minus sign (-).
10. **MulOp -> ***: *A multiplication operator can be an asterisk (*).
11. **MulOp -> /**: Alternatively, it can be a forward slash (/).
12. **ExpOp -> ^**: An exponentiation operator can be a caret (^).
13. **Number -> Digit**: A number can be a single digit.
14. **Number -> Digit Number**: Alternatively, a number can be a digit followed by another number (this allows for multi-digit numbers).
15. **Digit -> 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9**: A digit can be any one of the numbers from 0 to 9.

TREE

3+4×2