[BNF GRAMMAR]

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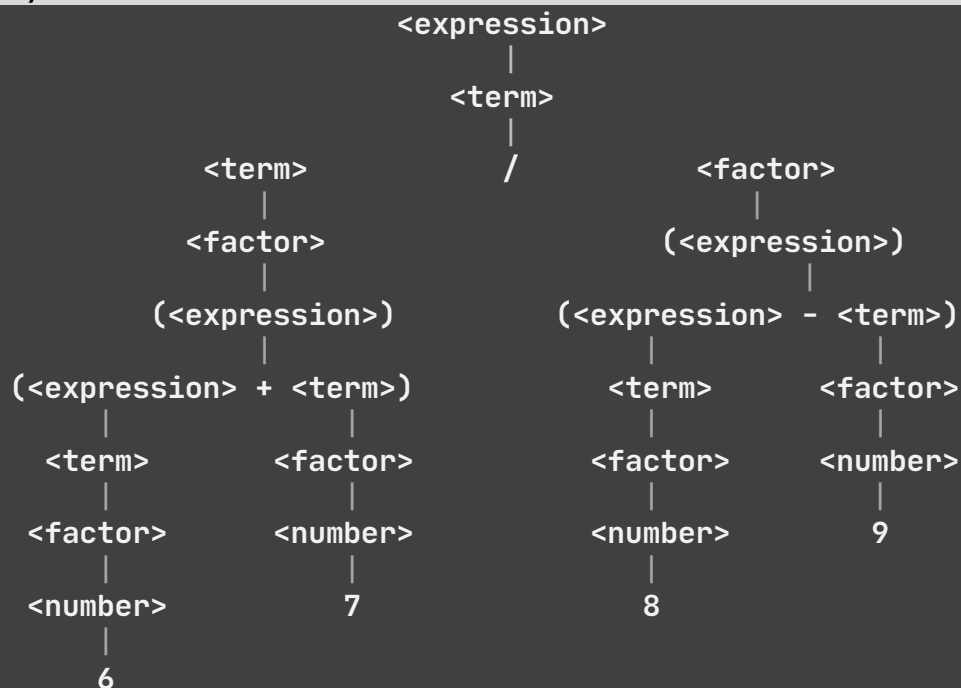3BSCS-1

RIGHT MOST DERIVATION (RMS)

➔ <expression>
➔ <term>
➔ <term>/<factor>
➔ <term>/(<expression>)
➔ <term>/(<expression>-<term>)
➔ <term>/(<expression>-<factor>)
➔ <term>/(<expression>-<number>)
➔ <term>/(<expression>-9)
➔ <term>/(<term>-9)
➔ <term>/(<factor>-9)
➔ <term>/(<number>-9)
➔ <term>/(8-9)
➔ <factor>/(8-9)
➔ (<expression>)/(8-9)
➔ (<expression>+<term>)/(8-9)
➔ (<expression>+<factor>)/(8-9)
➔ (<expression>+<number>)/(8-9)
➔ (<expression>+7)/(8-9)
➔ (<term>+7)/(8-9)
➔ (<factor>+7)/(8-9)
➔ (<number>+7)/(8-9)
➔ **(6+7)/(8-9)**

PARSE TREE (RMS)

```
                              <expression>
                                   |
                                <term>
                                   |
            <term>                 /              <factor>
              |                                      |
           <factor>                              (<expression>)
              |                                      |
         (<expression>)                 (<expression> - <term>)
              |                                |            |
   (<expression> + <term>)                  <term>       <factor>
        |            |                         |            |
      <term>      <factor>                  <factor>     <number>
        |            |                         |            |
     <factor>     <number>                  <number>       9
        |            |                         |
     <number>       7                          8
        |
        6
```

LEFT MOST DERIVATION (LMS)

➔ `<expression>`
➔ `<term>`
➔ `<term>/<factor>`
➔ `<factor>/<factor>`
➔ `(<expression>)/<factor>`
➔ `(<expression>+<term>)/<factor>`
➔ `(<term>+<term>)/<factor>`
➔ `(<factor>+<term>)/<factor>`
➔ `(<number>+<term>)/<factor>`
➔ `(6+<term>)/<factor>`
➔ `(6+<factor>)/<factor>`
➔ `(6+<number>)/<factor>`
➔ `(6+7)/<factor>`
➔ `(6+7)/(<expression>)`
➔ `(6+7)/(<expression>-<term>)`
➔ `(6+7)/(<term>-<term>)`
➔ `(6+7)/(<factor>-<term>)`
➔ `(6+7)/(<number>-<term>)`
➔ `(6+7)/(8-<term>)`
➔ `(6+7)/(8-<factor>)`
➔ `(6+7)/(8-<number>)`
➔ **`(6+7)/(8-9)`**

PARSE TREE (LMS)

```
                        <expression>
                             |
                          <term>
                             |
        <term>               /              <factor>
          |                                    |
       <factor>                           (<expression>)
          |                                    |
     (<expression>)                  (<expression> - <term>)
          |                                |           |
(<expression> + <term>)                 <term>      <factor>
     |            |                        |           |
  <term>      <factor>                  <factor>    <number>
     |            |                        |           |
  <factor>    <number>                  <number>       9
     |            |                        |
  <number>        7                        8
     |
     6
```

Is the Grammar Ambiguous? (shade/fill your answer)

Yes	No
� shaded green	