Present the **CKY** recognition matrix for the string **a – a + a - a** assuming the Chomsky Normal Form grammar specified by the rules

**E → E F | M E | P E | a**

**F → M F | P F | M E | P E**

**P → +**

**M → −**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **a** | **−** | **a** | **+** | **a** | **−** | **a** |
| **1** |  |  |  |  |  |  |  |
| **2** |  |  |  |  |  |  |
| **3** |  |  |  |  |  |  |  |  |  |
| **4** |  |  |  |  |  |  |  |  |  |
| **5** |  |  |  |  |  |  |  |  |  |
| **6** |  |  |  |  |  |  |  |  |  |
| **7** | **E** |  |  |  |  |  |  |  |  |

 Be sure to note whether or not the string is accepted.

 Present the **CKY** recognition matrix for the string **a – a + a - a** assuming the Chomsky Normal Form grammar specified by the rules

**E → E F | M E | P E | a**

**F → M F | P F | M E | P E**

**P → +**

**M → −**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **a** | **−** | **a** | **+** | **a** | **−** | **a** |
| **1** | **E** | **M** | **E** | **P** | **E** | **M** | **E** |
| **2** |  | **E, F** |  | **E, F** |  | **E, F** |
| **3** | **E** |  | **E** |  | **E** |  |  |  |  |
| **4** |  | **E, F** |  | **E, F** |  |  |  |  |  |
| **5** | **E** |  | **E** |  |  |  |  |  |  |
| **6** |  | **E, F** |  |  |  |  |  |  |  |
| **7** | **E** |  |  |  |  |  |  |  |  |

The string is accepted since the start symbol **E** appears In the final cell.