Expression

- It is collection of operands and operators
    - operators :- mathematical symbols to represent some operation (eg. +, -, /, *)
    - operands :- data/values on which we perfrom operations
eg. a + b, a + b * c, a

- There are three types of Expressions:
1. Infix   a + b   - human
2. Prefix   + a b   - computer
3. Postfix   a b +   - computer

Operators:
()
$
* / %
+ -

Infix Expression : a * b / c * d + e – f * h + i

Postfix Expression : a b * c / d * e + f h * - i +
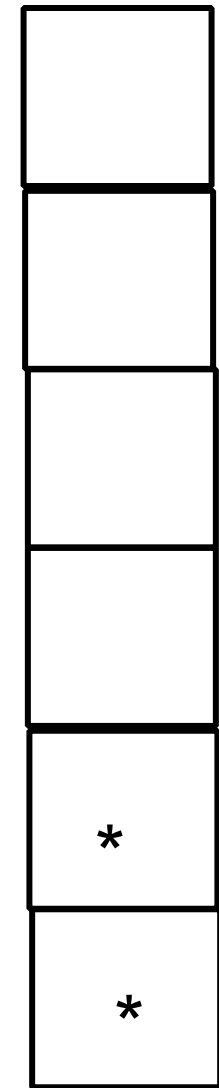
```
|       |
|       |
|       |
|       |
|   *   |
|   *   |
 Stack
```
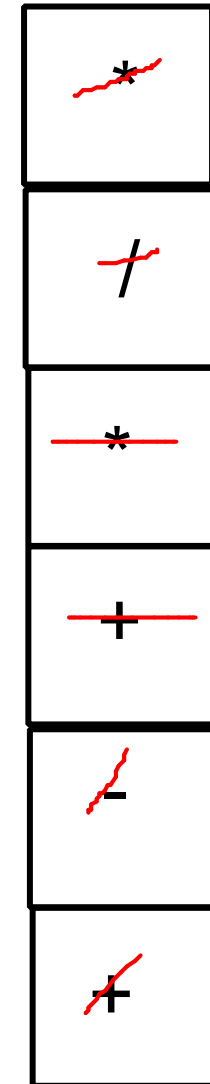
Infix to Prefix conversion

Infix Expression : a * b / c * d + e – f * h + i

Expression: i h f * e d c b a * / * + - +
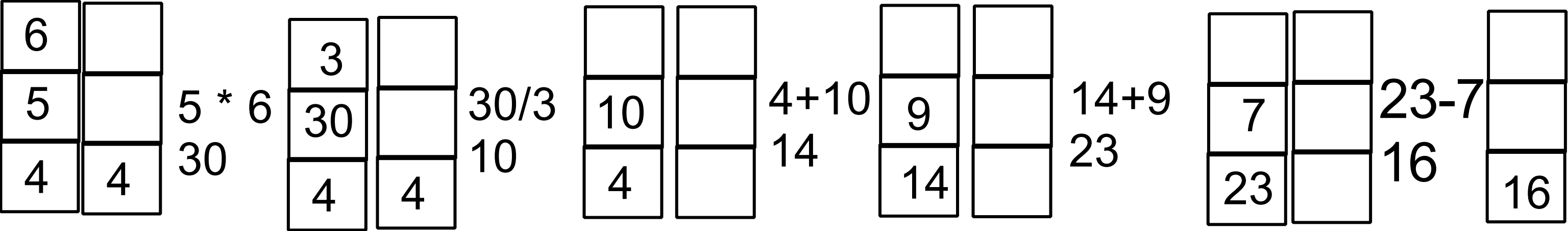Prefix Expression : + - + * / * a b c d e * f h i

Stack

Postfix Evaluation

Postfix Expression : 4 5 6 * 3 / + 9 + 7 -

6	
5	
4	4

5 * 6
30

3	
30	
4	4

30/3
10

10	
4	

4+10
14

9	
14	

14+9
23

7	
23	

23-7
16

16	

Prefix Expression : - + + 4 / * 5 6 3 9 7

5	
6	
3	3
9	9
7	7

5*6
30

30	
3	
9	9
7	7

30/3
10

4	
10	
9	9
7	7

4+10
14

14	
9	
7	7

14+9
23

23	
7	

23-7
16

16