Determine whether the string 1011 is described by each of the following regular expressions:

1. 10\*1\*
2. 0\*(10 | 11)\*
3. 1(01)\*1\*
4. 1\*01(0 | 1)
5. (10)\*(11)\*
6. 1(00)\*(11)\*
7. (10)\*1011
8. (1 | 00)(01 | 0)1\*

1.Yes

2.Yes

3.Yes

4.Yes

5.Yes

6.No

7.Yes

8.no

8.It is yes because

"(1 | 00)": This part of the expression matches either 1 or 00 at the beginning of the string. It must be 1 since it matches with our string.

"(01 | 0)": This part of the expression matches either 01 or 0 after the first character. It must be 01 which matches with our string.

"1\*": This part of the expression matches zero or more 1’s at the end of the string. Which means its just 1 in this instance.

So this expression is just 1011 or 0001 or 0001 or 00011 or 101 and the expression 1011 matches with our string 1011 thus yes string is defined by the regular expression