2. (30 points) Consider the following lex specification:

```plaintext
%option main
%
[+-]?[0-4]+ printf("[S: %s]", yytext);
[+-]*[5-9]* printf("[B: %s]", yytext);
while|do|if|else printf("<RES>");
.
;
```

What will be the output if we supply the following input to the compiled executable?

Please calculate -67+12? while doing this you can consider PI as 3, if you want

```
[B:  -67][S: +12]<RES><RES>[S: 3]<RES >
```

3. (30 points) Consider the following lex specification:

```plaintext
%option main
%
 a+b? printf("x");
 a*b? printf("y");
 . printf("z");
```

Give an example input so that the scanner will produce: `yyx`

`bba`

Give an example input so that the scanner will produce `z`

`c`