```
   /* cs152-fall08 */
   /* A flex scanner specification for the calculator language */
   /* Written by Dennis Jeffrey */

%{
   int currLine = 1, currPos = 1;
   int numNumbers = 0;
   int numOperators = 0;
   int numParens = 0;
   int numEquals = 0;
%}

DIGIT    [0-9]

%%

"-"            {printf("MINUS\n"); currPos += yyleng; numOperators++;}
"+"            {printf("PLUS\n"); currPos += yyleng; numOperators++;}
"*"            {printf("MULT\n"); currPos += yyleng; numOperators++;}
"/"            {printf("DIV\n"); currPos += yyleng; numOperators++;}
"="            {printf("EQUAL\n"); currPos += yyleng; numEquals++;}
"("            {printf("L_PAREN\n"); currPos += yyleng; numParens++;}
")"            {printf("R_PAREN\n"); currPos += yyleng; numParens++;}

(\.{DIGIT}+)|({DIGIT}+(\.{DIGIT}*)?([eE][+-]?[0-9]+)?)   {printf("NUMBER %s\n", yytext);
currPos += yyleng; numNumbers++;}

[ \t]+         {/* ignore spaces */ currPos += yyleng;}

"\n"           {currLine++; currPos = 1;}

.              {printf("Error at line %d, column %d: unrecognized symbol \"%s\"\n",
currLine, currPos, yytext); exit(0);}

%%

int main(int argc, char ** argv)
{
   if(argc >= 2)
   {
      yyin = fopen(argv[1], "r");
      if(yyin == NULL)
      {
         yyin = stdin;
      }
   }
   else
   {
      yyin = stdin;
   }

   yylex();

   printf("# Numbers: %d\n", numNumbers);
   printf("# Operators: %d\n", numOperators);
   printf("# Parentheses: %d\n", numParens);
   printf("# Equal Signs: %d\n", numEquals);
}
```