

CSE 130 (Wi 25) Handout

March 4, 2025

Question 1

Consider the regular expression

`[a-z A-Z] [a-z A-Z 0-9]*`

Write down two strings that *are matched* by this regular expression.

(1) _____ (2) _____

Write down two strings that *are not matched* by this regular expression.

(1) _____ (2) _____

Question 2

Consider the datatype `Exp`

`data Exp = AConst Int | AVar String | APlus Exp Exp | AMinus Exp Exp | AMul Exp Exp`

and the grammar

```
Aexpr : TNUM           { AConst $1   }
      | ID             { AVar   $1   }
      | '(' Aexpr ')'   { $2     }
      | Aexpr '*' Aexpr { AMul   $1 $3 }
      | Aexpr '+' Aexpr { APlus  $1 $3 }
      | Aexpr '-' Aexpr { AMinus $1 $3 }
```

Assuming no precedence rules were given, write down *four* possible `Exp` values that may be obtained by parsing the string `"10 + 20 + 30 * 40"`

(1) _____

(2) _____

(3) _____

(4) _____