This homework assignment has 2 problems, for a total of 40 points.

1. (16 points) Of the following statements, identify all that hold about XPath. (Below, E is an arbitrary XPath expression; i and j are positive integers.)
   - A. The `text()` function extracts the first text node under the current element
   - B. If $i \neq j$, we never have $E[i][j] = E[i][i]$
   - C. The only cases where $E[i][j] = E[i]$ are when $i = j = 1$
   - D. Assuming E does not evaluate to (), $E/foo$ is never equal to $E[foo]$
   - E. XPath doesn’t include recursive queries
   - F. The query `let $x := 1 return (2)[1]` produces a result of 2
   - G. In XPath, * abbreviates node()
   - H. $E[@lg]$ selects members of $E$ for which attribute @lg is defined and is not equal to the empty string

2. (24 points) Of the following statements, identify all that hold about XQuery. (Below, `Set` and `Pred` are functions and $x$ and $v$ are variables.)
   - A. Using no axes other than parent and child, we can write an XQuery function that would compute the ancestors of its argument element
   - B. The order of evaluation of bindings in XQuery’s `some` and `every` clauses is implementation-dependent
   - C. XQuery will become a candidate recommendation of the W3C in 2008
   - D. If `every $x in Set($v) satisfies Pred($x,$v)` then `some $x in Set($v) satisfies Pred($x,$v)`
   - E. The Effective Boolean Value of a proper negative fraction such as `-0.5` is true
   - F. The Effective Boolean Value of a string containing a proper negative fraction such as `"-0.5"` is neither true nor false
   - G. An easy way to swap values of $x$ and $y$ is let $x := y$ followed immediately by let $y := x$
   - H. Consider a let clause with multiple variables. In such a clause, a positional variable (as in `at $pos`) refers to the position of each variable being assigned
   - I. The snippet 5 is a valid XQuery query even though it is not an XML document
   - J. The snippet `<foo>5</bar>` is a valid XQuery query even though it is not an XML document
   - K. If you ever see $x$ in an XQuery query, and the $x$ is not placed within quotes, then the $x$ is a variable
   - L. An executable XQuery query cannot contain any free variable