QUIZ!
Use a full sheet of 8½x11" paper. (Half sheet? Half credit!)

Put only your last name in the far upper left hand corner of the sheet, where a staple would hit it. It's OK to write BIG, just start in the corner!

Mitchell AVOID A ½-POINT DEDUCTION!

Keep answers short! Avoid full sentences. Feel free to abbreviate.

3 questions; 3 minutes; 3 points plus a half-point EC.

Question 3 is worth two points.

Numbering responses may help you avoid overlooking a question. You may go ahead and number your paper.
1. Add parentheses to the following expression to show the order of operations:  \( a \ b + x \ y \ z \)

2. The `length` function produces the length of a list. What's the type of `length`?

3. Write a function `nzs` that returns the number of zeroes in a list. (2 points!)

   \[
   > \text{nzs} \ [5,0,0,5] \\
   2
   \]

EC ½ point:
Write a function `f` whose type is inferred to be `a -> a -> a`. Be sure that `a` doesn't have a class constraint, like `Eq a`. 
Solutions

1. Add parentheses to the following expression to show the order of operations:
   \[ a \, b \, + \, x \, y \, z \]
   \[ (a \, b) \, + \, ((x \, y) \, z) \]

2. The `length` function produces the length of a list. What's the type of `length`? `[a] \rightarrow \text{Int}`

3. Write a function `nzs` that returns the number of zeroes in a list.
   Two solutions:
   \[
   \text{nzs} \, [] \, = \, 0 \\
   \text{nzs} \, (0 : \, t) \, = \, 1 \, + \, \text{nzs} \, t \\
   \text{nzs} \, (_ : \, t) \, = \, \text{nzs} \, t
   \]

   \[
   \text{nzs} \, [] \, = \, 0 \\
   \text{nzs} \, (h : \, t) \\
   \quad | \, h \, == \, 0 \, = \, 1 \, + \, \text{nzs} \, t \\
   \quad | \, \text{otherwise} \, = \, \text{nzs} \, t
   \]

   EC ½ point: Write \( f \) whose type is inferred to be \( a \rightarrow a \rightarrow a \).
   \[
   f \, x \, y \, = \, \text{head} \, [x, \, y]
   \]