QUIZ!
Quiz Stuff

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

Put your last name and NetID in the far upper left hand corner of the paper, **where a staple would hit it.** (It helps us sort quizzes!)

Mitchell, whm

No need to write out questions.

Numbering responses may help you avoid overlooking a question; it's ok to go ahead and pre-number your sheet.

It's ok to abbreviate, like using "otw" for "otherwise".
1. Write a function $f$ such that $f \ x$ returns 7, no matter what the value of $x$ is.

2. Given a function $g$ with type $\text{Char} \rightarrow (\text{Int} \rightarrow \text{Bool})$, what is the type of each of the following two expressions?
   
   $g \ 'x'$
   
   $g \ 'x' \ 5$

3. Using guards to handle cases, write a function $\text{roman}$ such that
   
   $\text{roman} \ 5$ returns 'V'
   
   $\text{roman} \ 10$ returns 'X'
   
   $\text{roman}$ anything else returns '?'

4. Extra credit (½ point): What's the type of $\text{roman}$?
1. \( f \ x = 7 \)

2. \( > \) let \( g \) char ordval = ord char == ordval

   \( > \) :type g
   g :: Char -> Int -> Bool

   \( > \) :type g 'x'
   g 'x' :: Int -> Bool

   \( > \) :type g 'x' 5
   g 'x' 5 :: Bool
3. \textit{roman} n \\
\hspace{1em} | n == 5 = 'V' \\
\hspace{1em} | n == 10 = 'X' \\
\hspace{1em} | otherwise = '?' \\

> roman 5 \\
'V' \\
> roman 10 \\
'X' \\
> roman 3 \\
'?' \\

> :type roman \\
roman :: (Eq a, Num a) => a -> Char