Sample Midterm #2

1. Evaluate each expression. If any cannot be evaluated, say why.
   a. \(3 + 5.0\)
   b. "hello" + "goodbye"
   c. \(7 \times True\)
   d. \(6 / "spam"\)
   e. True and not False or True
   f. "monty" <= "python"

2. Convert the following into Python:
   a. “hello” follows “goodbye” in the character ordering of the computer
   b. The value of the variable \(answer\) is true or the value of the variable \(y\) is less than 126
   c. The function \(gleep\) is called with an argument of \(-21\)

3. Convert the following into a “for” loop:
   
   ```python
   i = 1
   while i < 10:
       print i * "x"
   i += 3
   ```

4. What does the following function do when given a string as the first argument and a string containing only one character as the second argument?
   ```python
def f(s, c):
    i = 0
    while i < len(s):
        if s[i] == c:
            return i
        i += 1
    return -1
   ```

5. In the following program:
   ```python
   try:
       x = input("Enter a number: ");
       y = 1 / x;
   except ZeroDivisionError:
       print "Nice try: you divided by 0"
   except SyntaxError:
       print "What on earth did you type?"
   except NameError:
       print "I have no clue what that name refers to"
   except TypeError:
       print "I don't handle conversions well today"
   else:
       print "The reciprocal of", x, "is", y;
   ```
   Please show five different inputs, each of which will execute a different print statement in the program.
6. What does the following program print?

```python
def a(hi):
    hi = 7
    return hi + 3

def main():
    hi = 8
    lo = 3
    print hi, lo
    lo = a(hi)
    print hi, lo

main()
```