CS 160
CS Orientation
Programming Structure & Functions
Chap. 4 & 5
What is the purpose of a function?

• Perform some task!
  – May take input (arguments)
  – May produce output (print)
  – May return a value (return statement)
  – May alter input (change argument values if mutable)

• Example: \( y = f(x) = 3 \times x \);
def func_to_define(possible_parameters):
    print("hello");
    possible_parameter = 3;
    return "jennifer";

a=2;
name = func_to_define(a);
print(func_to_define(a));
Remember Our Gross Pay Example

• For all the employees in our company, calculate their gross pay based on their hours and pay rate.

  prompt for #employees
  read #employees & assign to var
  for all employees
  prompt/read hours
  prompt/read pay
  print calculation of hours*pay
```python
num = int(input("Enter num employees: "))
for x in range (num):
    pay = float(input("Employee " + str(x+1) + " pay: "));
    hours = float(input("Employee " + str(x+1) + " hours: "));
    wages = pay * hours;
print("Your gross pay is " + str(wages));
```
Quiz 6

What if the problem changed?

• What if you have to make sure the user gives you a valid number of employees?
• What if you have to make sure the user gives you a valid hour and pay?
• Required functions:
  get_num_employees()
  main()

Hint: Don’t change to valid until it is.
Quiz #6 Partial Solution...

```python
1 def main():
2     num_str = input("Enter num employees: ")
3     for i in range(len(num_str)):
4         if(not(num_str[i]>'0' and num_str[i]<='9')):
5             print("You idiot!!!");
6             break;
7     if(i==len(num_str)):
8         num = int(num_str);
9     for x in range(num):
10        pay = float(input("Employee " + str(x+1) + " pay: "));
11        hours = float(input("Employee " + str(x+1) + " hours: "));
12        wages = pay * hours;
13        print("Your gross pay is " + str(wages));
14
15
17
18 main();
```