Python Lesson 3

Correct the code below:

In[1]: pies = 6
if pies >= 3:
   print("I have many pies!")
else:
   print("I don't have too many pies.")
	Out[1]: I don't have too many pies.

In[2]: pies = 0
if pies >= 3:
   print("I have many pies!")
else:
   print("I don't have too many pies.")
	Out[2]: I have many pies!

In[3]: _____ = 3
if kit <= 2:
   print("You need more safety kits!)
else:
   print("You are prepared for an emergency!")
	Out[3]: You are prepared for an emergency!

In[4]: total_books = 5
read_books = __
if total_books == read_books:
   print("You have read all the books!"
   print("Go play outside!)
	Out[4]: You have read all the books!
	Go play outside!

In[5]: total_books = 5
read_books = __
if total_books == read_books:
   print("You have read all the books!"
   print("Go play outside!)
   _____:
   print("You must stay inside and finish reading your books.")
	Out[5]: You must stay inside and finish reading your books.

In[6]: vases = __
flowers = ___
if vases == flowers:
   print("The number of vases,", vases, ",is equal to the number of flowers,", flowers)
else:
   print("The number of vases", vases, "is not equal to the number of flowers", flowers)
	Out[6]: The number of vases, 15, is equal to the number of flowers, 15.

In[7]: _____ = __
if chess >= 4:
   print("I've played chess many times this week")
else:
   print("I haven't played chess a lot this week")
	Out[7]: I haven't played chess a lot this week

In[8]: walks = ___
if walks >= 5:
  print("You will receive double pay:", "$ ",
(walks * 6) * 2)
else:
  print("You will receive regular pay:", walks *
6)
	Out[8]: You will receive double
	pay: $ 84

In[9]: max_tree_height = ___
if max_tree_height <3:
  print("My tree type is a bonsai")
elif max_tree_height > 150:
  print(" My tree type is a giant evergreen or
banyan")
elif max_tree_height > 15:
  print("My tree type is a normal deciduous
tree")
else:
  print("My tree type is a dwarf tree")
	Out[9]: My tree type is a dwarf
	tree

In[10]:my_pig_weight = ____
if my_pig_weight > 300:
  print("My pig will place")
elif my_pig_weight >200:
  print("My pig may place or show")
else:
  print("My pig will not place or show")
	Out[10]: My pig may place

In[11]: ate_dinner = ___
ate_dessert=___
finished_homework=___
 	
if ate_dinner==True:
  if ate_dessert==True:
    if finished_homework==True:
      print("Go play!")
    else:
      print("Go finish your homework")
  else:
    print("Still at the kitchen table and quite
full")
else:
  print("Still at the kitchen table and hungry")
	Out[11]: Go play!

Answer key

In[1]: pies = 2
if pies >= 3:
   print("I have many pies!")
else:
   print("I don't have too many pies.")

(Can assign any number 2 and below to the variable 'pies' to print the second statement, but an alternative is to edit the if statement itself to reflect the statement that needs to be printed)

In[2]: pies = 7
if pies >= 3:
   print("I have many pies!")
else:
   print("I don't have too many pies.")

(Can assign any number 3 or greater to the variable 'pies' to print the first statement, but an alternative is to edit the if statement itself to reflect the statement that needs to be printed)

In[3]: kit = 3
if kit <= 2:
   print("You need more safety kits!)
else:
   print("You are prepared for an emergency!")

(Since the variable name 'kit' is used in the if statement, you need to assign the integer value 3 to 'kit' in order for the variable to be used in the if statement)

In[4]: total_books = 5
read_books = 5
if total_books == read_books:
   print("You have read all the books!"
   print("Go play outside!)

(In order to be able to print the statements, the value of 'total_books' must be equivalent to the value of 'read_books'. You can achieve this by either assigning the value 5 to 'read_books' or providing a mathematical expression that equals 5, such as 3 + 2)

In[5]: total_books = 5
read_books = 4
if total_books == read_books:
   print("You have read all the books!"
   print("Go play outside!)
else:
   print("You must stay inside and finish reading your books.")

In[6]: vases = 15
flowers = 15
if vases == flowers:
   print("The number of vases,", vases, ",is equal to the number of flowers,", flowers)
else:
   print("The number of vases", vases, "is not equal to the number of flowers", flowers)

In[7]: chess = 3
if chess >= 4:
  print("I've played chess many times this week")
else:
   print("I haven't played chess a lot this week")

(Since variable 'chess' is indicated in the if statement, the variable on top must be 'chess' as well. The value assigned to 'chess' should be a value less than 4, in this case its 3, in order to print the second statement)

In[8]: walks = 7
if walks >= 5:
  print("You will receive double pay:", "$ ", (walks * 6) * 2)
else:
   print("You will receive regular pay:", walks * 6)

(Assigning the variable 'walks' to the integer value 7 will allow for the if statement to test True and the first statement will be printed with the dollar amount to be $84 in the output.)

In[9]: max_tree_height = 4
if max_tree_height <3:
   print("My tree type is a bonsai")
elif max_tree_height > 150:
   print(" My tree type is a giant evergreen or banyan")
elif max_tree_height > 15:
   print("My tree type is a normal deciduous tree")
else:
   print("My tree type is a dwarf tree")

(The variable 'max_tree_height' can have the value greater or equal to 3, but less than or equal to 15 in order for the else statement to test True.)

In[10]:my_pig_weight = 350
if my_pig_weight > 300:
   print("My pig will place")
elif my_pig_weight >200:

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   print("My pig may place or show")
else:
   print("My pig will not place or show")
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(The variable 'my_pig_weight' has to be greater than or equal to 300 in order for the statement 'My pig will place' to print. Here, we chose a weight of 350.)

```
In[11]: ate_dinner = True
ate_dessert = True
finished_homework = True

if ate_dinner==True:
    if ate_dessert==True:
        if finished_homework==True:
            print("Go play!")
        else:
            print("Go finish your homework")
    else:
         print("Still at the kitchen table and quite full")
else:
    print("Still at the kitchen table and hungry")
```

(The three if statements will test True and result in the statement 'Go play!' will print if all the variables indicated above are equal to True. This is an example of nested if else statements. Play around with the variables to allow the other print statements to be printed in the output)