

Handy reference sheet 3 (Python 3)

Creating conditions to become false.

```
#set the variables
health = 10
zombies = 0
damage = 3

# while loop checks if health >0
while health > 0:
    zombies += 1
    health -= damage
    print("You fight and defeat a
zombie, but take", damage, "damage
points.\n")

# exits when health is 0 or less
print("You fought well, defeating",
zombies, "zombies.")
```

COUNTING with a FOR Loop (RANGE function)

```
print("Counting:")
for i in range(10):
    print(i, end=" ")

# counts in fives
print("\n\nCounting by fives:")
for i in range(0, 50, 5):
    print(i, end=" ")

# counts backwards
print("\n\nCounting backwards:")
for i in range(10, 0, -1):
    print(i, end=" ")
```

Useful functions

```
>>> word = "help"
>>> print(word[0])
h
>>> print(word[1])
e
```

Using the break statement to exit a loop and continue

```
count = 0
while True:
    count += 1
# end loop if count greater than 10
    if count > 10:
        break
# skip 5
    if count == 5:
        continue
    print(count)
```

Guess my number with WHILE loop

```
print("Welcome to Guess My Number!")
print("I'm thinking of a number be-
tween 1 and 100.")
import random
# set the values number,guess,tries
number = random.randint(1, 100)
guess = int(input("Take a guess: "))
tries = 1

# guessing loop
while guess != number:
    if guess > number:
        print("Lower...")
    else:
        print("Higher...")

    guess = int(input("Guess now: "))
    tries += 1

print("You got it! It was", number)
print("You took ", tries, "tries!")
```

Useful functions

```
>>> word = "help"
>>> print(word[-1])
p
>>> print(word[-2])
l
```