

Worksheet: Working with Loops

Determine what each of these code fragments does by mentally tracing the code. Type up your answers along with the questions.

Problem 1.

```
1 a = [1, 10, 14]
2 for i in a:
3     print (i)
```

Problem 3.

```
1 a = [1, 10, 14]
2 for i,j in enumerate(a):
3     print (i)
```

Problem 5.

```
1 a = []
2 for i in range(0, 10, 2):
3     a.append(i)
4
5 print (a)
```

Problem 7.

```
1 a = {
2     42: "Pirates",
3     11: "Ninjas"
4 }
5 for i,j in a.items():
6     print (j, i)
```

Problem 9.

```
1 a = {}
2 for i in range(0, 10, 2):
3     a[i] = i * 100 + 11
4
5 print (a)
```

Problem 2.

```
1 a = [1, 10, 14]
2 for i in a:
3     print (i, end="_")
```

Problem 4.

```
1 x="hello "
2 for i in x:
3     print(i, end="_")
```

Problem 6.

```
1 a = {
2     "name": "Bella_Swan",
3     "likes":["Ed", "Jake"]
4 }
5 for b in a["likes"]:
6     print (b)
```

Problem 8.

```
1 a = {
2     42: "Pirates",
3     11: "Ninjas"
4 }
5 for i in a:
6     print (i)
```

Problem 10.

```
1 a = {}
2 for i in range(0, 4):
3     b = []
4     for j in range(0, 4):
5         b.append(j)
6     a[i]=b
7
8 print (a)
```

Problem 11.

```
1 a = [{
2     "name": "Bella_Swan",
3     "race": "Vampire"
4 },
5     {
6     "name": "Jacob_Black",
7     "race": "Werewolf"
8 }]
9 for b in a:
10     print (b["name"])
```

Problem 13.

```
1 x = 3
2 while (x<10):
3     x=x*2
4
5 print (x)
```

Problem 15.

```
1 mylist=[]
2 x=0
3 while(not mylist):
4     mylist.append(x)
5     x+=x
6
7 print(mylist)
```

Problem 17.

```
1 count = 0
2 a = 5
3 b = 0
4 while (a or b):
5     a-=1
6
7 print(a or b)
```

Problem 19.

```
1 nums=[]
2 while len(nums)<5:
3     nums.append(len(nums))
4
5 print(nums)
```

Problem 12.

```
1 a= ['apple', 'orange',
2     'kiwi', 'pear']
3 count = 0
4 for fruit in a:
5     if fruit[0] in 'aeiou':
6         continue
7     else:
8         count += 1
9
10 print(count)
```

Problem 14.

```
1 x = "CS_126"
2 while (x != ""):
3     x=x[1:]
4
5 print(x)
```

Problem 16.

```
1 total = 0
2 while True:
3     total+=1
4     if total>10:
5         break
6
7 print(total)
```

Problem 18.

```
1 animals=["bear", "cat", "dog"]
2
3 while "bear" in animals:
4     print("roar")
5     del animals[-1]
```

Problem 20.

```
1 x="hello"
2 while len(x)<16:
3     x=x*2
4
5 print(x)
```