Short Answer

1. What will the following code display?

```
dct = {'Monday':1, 'Tuesday':2, 'Wednesday':3}
print(dct['Tuesday'])
```

2. What will the following code display?

```
dct = {'Monday':1, 'Tuesday':2, 'Wednesday':3}
print(dct.get('Monday', 'Not found'))
```

3. What will the following code display?

```
dct = {'Monday':1, 'Tuesday':2, 'Wednesday':3}
print(dct.get('Friday', 'Not found'))
```

4. What will the following code display?

```
stuff = {'aaa' : 111, 'bbb' : 222, 'ccc' : 333}
print(stuff['bbb'])
```

5. How do you delete an element from a dictionary?
6. How do you determine the number of elements that are stored in a dictionary?
7. What will the following code display?

```
dct = {1:[0, 1], 2:[2, 3], 3:[4, 5]}
print(dct[3])
```

8. What values will the following code display? (Don't worry about the order in which they will be displayed.)

```
dct = {1:[0, 1], 2:[2, 3], 3:[4, 5]}
for k in dct:
    print(k)
```

9. After the following statement executes, what elements will be stored in the `myset` set?

```
myset = set('Saturn')
```

10. After the following statement executes, what elements will be stored in the `myset` set?

```
myset = set(10)
```

11. After the following statement executes, what elements will be stored in the `myset` set?

```
myset = set('a bb ccc dddd')
```

12. After the following statement executes, what elements will be stored in the `myset` set?

```
myset = set([2, 4, 4, 6, 6, 6, 6])
```

13. After the following statement executes, what elements will be stored in the `myset` set?

```
myset = set(['a', 'bb', 'ccc', 'dddd'])
```

14. What will the following code display?

```
myset = set('1 2 3')
print(len(myset))
```

15. After the following code executes, what elements will be members of `set3`?

```
set1 = set([10, 20, 30, 40])
set2 = set([40, 50, 60])
set3 = set1.union(set2)
```

16. After the following code executes, what elements will be members of `set3`?

```
set1 = set(['o', 'p', 's', 'v'])
set2 = set(['a', 'p', 'r', 's'])
set3 = set1.intersection(set2)
```

17. After the following code executes, what elements will be members of `set3`?

```
set1 = set(['d', 'e', 'f'])
set2 = set(['a', 'b', 'c', 'd', 'e'])
set3 = set1.difference(set2)
```

18. After the following code executes, what elements will be members of `set3`?

```
set1 = set(['d', 'e', 'f'])
set2 = set(['a', 'b', 'c', 'd', 'e'])
set3 = set2.difference(set1)
```

19. After the following code executes, what elements will be members of `set3`?

```
set1 = set([1, 2, 3])
set2 = set([2, 3, 4])
set3 = set1.symmetric_difference(set2)
```

20. Look at the following code:

```
set1 = set([100, 200, 300, 400, 500])
set2 = set([200, 400, 500])
```

Which of the sets is a subset of the other?

Which of the sets is a superset of the other?

Algorithm Workbench

1. Write a statement that creates a dictionary containing the following key-value pairs:

```
'a' : 1
'b' : 2
'c' : 3
```

2. Write a statement that creates an empty dictionary.
3. Assume the variable `dct` references a dictionary. Write an `if` statement that determines whether the key `'James'` exists in the dictionary. If so, display the value that is associated with that key. If the key is not in the dictionary, display a message indicating so.
4. Assume the variable `dct` references a dictionary. Write an `if` statement that determines whether the key `'Jim'` exists in the dictionary. If so, delete `'Jim'` and its associated value.
5. Write code to create a set with the following integers as members: 10, 20, 30, and 40.
6. Assume each of the variables `set1` and `set2` references a set. Write code that creates another set containing all the elements of `set1` and `set2`, and assigns the resulting set to the variable `set3`.
7. Assume each of the variables `set1` and `set2` references a set. Write code that creates another set containing only the elements that are found in both `set1` and `set2`, and assigns the resulting set to the variable `set3`.