1. What does an empty dictionary's code look like?

```
In [2]:    1  dict={}   # empty dictionary
```

2. What is the value of a dictionary value with the key 'foo' and the value 42?

```
In [5]:    1  dict={'foo':42}
```

3. What is the most significant distinction between a dictionary and a list?

Dictionary is a generic type and returns an error if you try to find a key which is not there.

List collection is a generic class and can store any data types to create a list.

A list is a group of items – Dictionary is a set of key-value pairs.

Looping is easier and faster in a list and access element using index easily with a List.

4. What happens if you try to access spam['foo'] if spam is {'bar': 100}?

key error is shown

```
In [9]:    1  spam={'bar':100}
```

```
In [10]:   1  spam['foo']
```

```
---------------------------------------------------------------------------
KeyError                                  Traceback (most recent call last)
Input In [10], in <cell line: 1>()
----> 1 spam['foo']

KeyError: 'foo'
```

5. If a dictionary is stored in spam, what is the difference between the expressions 'cat' in spam and 'cat' in spam.keys()?

no difference

```
In [12]:   1  spam={'cat':43,'rat':56}
```

```
In [13]:   1  'cat' in spam   # check for keys
```
```
Out[13]: True
```

```
In [15]:   1  'cat' in spam.keys() # check for keys
```
```
Out[15]: True
```

6. If a dictionary is stored in spam, what is the difference between the expressions 'cat' in spam and 'cat' in spam.values()?

```
In [16]:   1  spam
```
```
Out[16]: {'cat': 43, 'rat': 56}
```

```
In [17]:   1  'cat' in spam   # check for keys
```
```
Out[17]: True
```

```
In [18]:   1  'cat' in spam.values() # check for values
```
```
Out[18]: False
```

7. What is a shortcut for the following code?

if 'color' not in spam: spam['color'] = 'black'

In [21]:
```
1  spam.setdefault('color', 'black')
```
Out[21]: 'black'

In [23]:
```
1  spam
```
Out[23]: {'cat': 43, 'rat': 56, 'color': 'black'}

8. How do you "pretty print" dictionary values using which module and function?

In [24]:
```
1  import pprint
```

In [25]:
```
1  dict
```
Out[25]: {'foo': 42}

In [26]:
```
1  pprint.pprint(dict)
```
{'foo': 42}

In [ ]:
```
1
```