1. the dictionary should be set to {}.
2. {'foo': 42}
3. The items stored in a dictionary are unordered, while the items in a list are ordered.
4. You get a KeyError error.
5. There is no difference. The in operator checks whether a value exists as a key in the dictionary.
6. 'cat' in spam checks whether there is a 'cat' key in the dictionary, while 'cat' in spam.values() checks whether there is a value 'cat' for one of the keys in spam.
7. spam.setdefault('color', 'black')
8. pprint.pprint()