Think Python:
Chapter 16-17

A function that doesn't modify any of the objects passed to it as arguments nor have any effect and does nothing except returning a value is termed a(n) _____ function.

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`pure`

Functions that DO modify objects received as parameters are termed _____.

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```
modifiers
```

The author of our textbook recommends writing _____ functions whenever it is reasonable, resorting to _____ only when one has a compelling reason.

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`pure, modifiers`

A(n) _____ programming style involves writing pure functions whenever possible and modifiers only if there is a compelling advantage.

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functional

A(n) _____ is a requirement that should always be true during a program's execution.

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invariant

Methods are defined inside a(n) _____ definition.

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```
class
```

```python
class Airedale:
  def diet_results(dog):
      dog.weight *= .9

Charlotte = Airedale()
Charlotte.sex = "female"
Charlotte.age = 10.25
Charlotte.weight = 70
Charlotte.diet_results()

print("Charlotte's weight goal post-diet is",
Charlotte.weight)
```

Charlotte's weight goal post-diet is 63.0

```
class Airedale:
  def diet_results(dog):
      dog.weight *= .9

Charlotte = Airedale()
Charlotte.sex = "female"
Charlotte.age = 10.25
Charlotte.weight = 70
Charlotte.diet_results()
```

What is diet_results?
Where is it located?
Which type of dot notation is used to call it?

```python
class Airedale:
  def diet_results(dog):
      dog.weight *= .9

Charlotte = Airedale()
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Charlotte.diet_results()
```

What is *diet_results*?   A method
Where is it located?   Inside the class definition
Which type of dot notation is used to call it?
   Method syntax, the more common

```python
class Airedale:
  def diet_results(self):
      self.weight *= .9


Charlotte = Airedale()
Charlotte.sex = "female"
Charlotte.age = 10.25
Charlotte.weight = 70
Charlotte.diet_results()
```

What's different here?

```
class Airedale:
  def diet_results(self):
      self.weight *= .9


Charlotte = Airedale()
Charlotte.sex = "female"
Charlotte.age = 10.25
Charlotte.weight = 70
Charlotte.diet_results()
```

What's different here?

--First parameter is named with convention of "self"

--Referring to attributes within the method requires the dot notation to use self, i.e., *self.weight*, instead of *dog.weight* as in the last example