

Answer's / Explanation's

1. class Thing:

```
    pass
    new = Thing()
    print(Thing)
    print(new)
```

No, the printed values are not same.

2. class Thing2:

```
    letters = 'abc'
    print(Thing2.letters)
```

3. class Thing3:

```
    def __init__(self):
        self.letters = 'abc'
    print(Thing3.letters)
```

No, we don't need any object for doing this.

4. class Elements:

```
    def __init__(self, name, symbol, number):
        self.name = name
        self.symbol = symbol
        self.number = number
```

```
my_obj = Elements('Hydrogen', 'H', 1)
```

5. my_dict = {'name':'Hydrogen', 'symbol':'H', 'num':1}
hydrogen = Elements(**my_dict)

6. class Elements:

```
    def __init__(self, name, symbol, number):
        self.name = name
        self.symbol = symbol
        self.number = number
    def dump(self):
        print(self.name)
        print(self.symbol)
        print(self.num)
```

```
hydrogen = Elements('Hydrogen', 'H', 1)
hydrogen.dump()
```

7. class Elements:

```
def __init__(self, name, symbol, number):
```

```
    self.name = name
```

```
    self.symbol = symbol
```

```
    self.number = number
```

```
def __str__(self):
```

```
    print(self.name)
```

```
    print(self.symbol)
```

```
    print(self.num)
```

```
hydrogen = Elements('Hydrogen', 'H', 1)
```

```
print(hydrogen)
```

8. class Elements:

```
def __init__(self, name, symbol, number):
```

```
    self.__name = name
```

```
    self.__symbol = symbol
```

```
    self.__number = number
```

```
def get_name(self):
```

```
    return self.__name
```

```
def get_symbol(self):
```

```
    return self.__symbol
```

```
def get_number(self):
```

```
    return self.__number
```

9. class Bear:

```
def eats(self):
```

```
    return 'berries'
```

```
class Rabbit:
```

```
def eats(self):
```

```
    return 'clover'
```

```
class Octothorpe:
```

```
def eats(self):
```

```
    return 'campers'
```

```
obj_b = Bear()
```

```
obj_r = Rabbit()
```

```
obj_o = Octothorpe()
```

```
print(obj_b.eats())
```

```
print(obj_r.eats())
```

```
print(obj_o.eats())
```

```
10.class Laser:
    def does(self):
        return 'disintegrate'
class Claw:
    def does(self):
        return 'crush'
class SmartPhone:
    def does(self):
        return 'ring'
class Robot:
    def __init__(self, l, c, s):
        self.laser = l
        self.claw = c
        self.smartphone = s
    def does(self):
        print('Laser: - ', self.laser.does())
        print('Claw: - ', self.claw.does())
        print('SmartPhone: - ', self.smartphone.does())

a = Laser()
b = Claw()
c = SmartPhone()
x = Robot(a, b, c)
x.does()
```