

Q1: Name Resolution and Inheritance

```
class A:
    x = 3 # Class Variable
    y = 5 # Class Variable

    def f(self):
        | return self.g0
    def g(self):
        | return 10
```

```
class B(A):
    y = 4 # Class Variable
    z = 42 # Class Variable

    def g(self):
        | return 14
    def h(self):
        | return 18
```

- Execute the following:


```
>>> a = A()
>>> b = B()
```
- What is value of `b.x`?

```
A: 4
B: 3
C: 42
D: ERROR
E: I don't know
```

13

A1: Name Resolution and Inheritance

```
class A:
    x = 3 # Class Variable
    y = 5 # Class Variable

    def f(self):
        | return self.g0
    def g(self):
        | return 10
```

```
class B(A):
    y = 4 # Class Variable
    z = 42 # Class Variable

    def g(self):
        | return 14
    def h(self):
        | return 18
```

- Execute the following:


```
>>> a = A()
>>> b = B()
```
- What is value of `b.x`?

```
A: 4
B: 3 CORRECT
C: 42
D: ERROR
E: I don't know
```

14

Q2: Name Resolution and Inheritance

```
class A:
    x = 3 # Class Variable
    y = 5 # Class Variable

    def f(self):
        | return self.g0
    def g(self):
        | return 10
```

```
class B(A):
    y = 4 # Class Variable
    z = 42 # Class Variable

    def g(self):
        | return 14
    def h(self):
        | return 18
```

- Execute the following:


```
>>> a = A()
>>> b = B()
```
- What is value of `a.z`?

```
A: 4
B: 3
C: 42
D: ERROR
E: I don't know
```

15

A2: Name Resolution and Inheritance

```
class A:
    x = 3 # Class Variable
    y = 5 # Class Variable

    def f(self):
        | return self.g0
    def g(self):
        | return 10
```

```
class B(A):
    y = 4 # Class Variable
    z = 42 # Class Variable

    def g(self):
        | return 14
    def h(self):
        | return 18
```

- Execute the following:


```
>>> a = A()
>>> b = B()
```
- What is value of `a.z`?

```
A: 4
B: 3
C: 42
D: ERROR CORRECT
E: I don't know
```

16

Q3: eq vs. is

`==` compares **equality**

`is` compares **identity**

```
c1 = Circle(1, 1, 25)
c2 = Circle(1, 1, 25)
c3 = c2
```

```
c1 == c2 → ?
c1 is c2 → ?
c2 == c3 → ?
c2 is c3 → ?
```

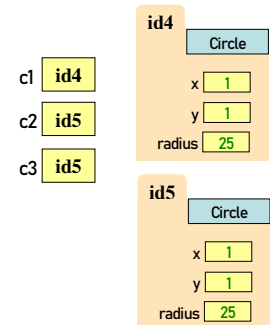
A3: eq vs. is

`==` compares **equality**

`is` compares **identity**

```
c1 = Circle(1, 1, 25)
c2 = Circle(1, 1, 25)
c3 = c2
```

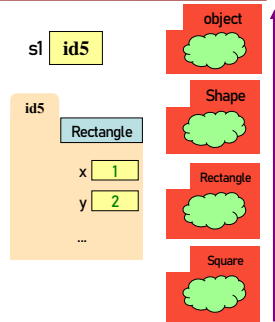
```
c1 == c2 → ? True
c1 is c2 → ? False
c2 == c3 → ? True
c2 is c3 → ? True
```



Q4: isinstance and Subclasses

```
>>> s1 = Rectangle(0,0,10,10)
>>> isinstance(s1, Square)
???
```

- A: True
- B: False
- C: Error
- D: I don't know

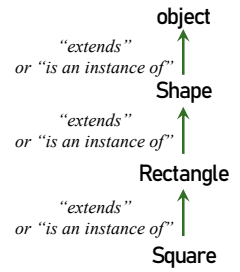


23

A4: isinstance and Subclasses

```
>>> s1 = Rectangle(0,0,10,10)
>>> isinstance(s1, Square)
???
```

- A: True
- B: False **CORRECT**
- C: Error
- D: I don't know



25