

### Clicker: frequency BB

How many memory cells are used to represent  
'(it seems (that you like me))'?

- A. 7
- B. 8
- C. 13**
- D. 14
- E. None of the above

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### Clicker: frequency BB

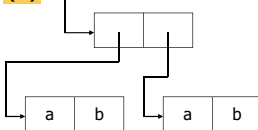
How many memory cells are used to represent  
'(it (seems that) (you) (like me))'?

- A. 8
- B. 9
- C. 14**
- D. 15**
- E. None of the above

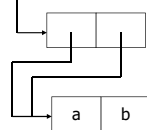
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### Clicker: frequency BB

(A)



(B)



Which one is the result of evaluating  
(cons (cons 'a 'b) (cons 'a 'b)) ?

### Clicker: frequency BB

```
class counter:
    overall_total = 0
    # class attribute
    def __init__(self):
        self.my_total = 0
    # data attribute
    def increment(self):
        counter.overall_total = \
            counter.overall_total + 1
        self.my_total = \
            self.my_total + 1
```

```
>>> a = counter()
>>> b = counter()
>>> a.increment()
>>> b.increment()
>>> a.my_total
1
>>> a.__class__.overall_total
2
>>> b.my_total
1
>>> b.__class__.overall_total
2
```

What's the value of a.my\_total?

- A: 1;** B: 2; C: 3; D: 4

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### Clicker: frequency BB

```
class counter:
    overall_total = 0
    # class attribute
    def __init__(self):
        self.my_total = 0
    # data attribute
    def increment(self):
        counter.overall_total = \
            counter.overall_total + 1
        self.my_total = \
            self.my_total + 1
```

```
>>> a = counter()
>>> b = counter()
>>> a.increment()
>>> b.increment()
>>> a.my_total
1
>>> a.__class__.overall_total
2
>>> b.my_total
1
>>> b.__class__.overall_total
2
```

What's value of a.\_\_class\_\_.overall\_total?

- A: 1; B: 2; **C: 3;** D: 4

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### Clicker: frequency BB

```
class counter:
    overall_total = 0
    # class attribute
    def __init__(self):
        self.my_total = 0
    # data attribute
    def increment(self):
        counter.overall_total = \
            counter.overall_total + 1
        self.my_total = \
            self.my_total + 1
```

```
>>> a = counter()
>>> b = counter()
>>> a.increment()
>>> b.increment()
>>> a.my_total
1
>>> a.__class__.overall_total
2
>>> b.my_total
1
>>> b.__class__.overall_total
2
```

What's value of b.my\_total?

- A: 1; **B: 2;** C: 3; D: 4

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### Clicker: frequency BB

```
class counter:
    overall_total = 0
    # class attribute
    def __init__(self):
        self.my_total = 0
    # data attribute
    def increment(self):
        counter.overall_total = \
            counter.overall_total + 1
        self.my_total = \
            self.my_total + 1
```

```
>>> a = counter()
>>> b = counter()
>>> a.increment()
>>> b.increment()
>>> a.my_total
0
>>> a.__class__.overall_total
1
>>> b.my_total
0
>>> b.__class__.overall_total
1
```

What's value of b.\_\_class\_\_.overall\_total?

A: 1; B: 2; **C: 3**; D: 4

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### Clicker: frequency BB

```
class A {
    public void display(A a) {
        System.out.println("In A.display(A)");}
    public void display(B b) {
        System.out.println("In A.display(B)");}
}
```

```
class B extends A {
    public void display(A a) {
        System.out.println("In B.display(A)");}
    public void display(B b) {
        System.out.println("In B.display(B)");}
}
```

```
A ab = new B();
ab.display(ab);
```

•What's the result of ab.display(ab)?

- A. In A.display(A)
- B. In A.display(B)
- C. In B.display(A)**
- D. In B.display(B)

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### Example 3

```
class A {
    A() {}

    public void display(A a) {System.out.println("In A.display(A)");}
    // public void display(B b) {System.out.println("In A.display(B)");}
}

class B extends A {
    B() {}

    public void display(A a) {System.out.println("In B.display(A)");}
    public void display(B b) {System.out.println("In B.display(B)");}
}
```

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### Clicker: frequency BB

```
A a = new A();
B b = new B();
A ab = new B();
```

What's the result of ab.display(b)?

- A. In A.display(A)
- B. In B.display(A)**
- C. In B.display(B)
- D. Runtime error

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### Clicker: frequency BB

```
A a = new A();
B b = new B();
A ab = new B();
```

What's the result of ab.display(a)?

- A. In A.display(A)
- B. In B.display(A)**
- C. In B.display(B)
- D. Runtime error

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### Clicker: frequency BB

```
A a = new A();
B b = new B();
A ab = new B();
```

What's the result of b.display(ab)?

- A. In A.display(A)
- B. In B.display(A)**
- C. In B.display(B)
- D. Runtime error

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### Clicker: frequency BB

```
A a = new A();  
B b = new B();  
A ab = new B();
```

What's the result of `b.display(b)`?

- A. In `A.display(A)`
- B. In `B.display(A)`
- C. In `B.display(B)`
- D. Runtime error

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