

Presentation 4

Defining Functions

Announcements

Reminders

- Have graded **AI quiz**
 - Take now if have not
 - If made 9/10, are okay
 - Else must retake
- **Survey 0** is *closing*
 - For participation score
 - Exam format important!
- Both are in CMS

Keeping Up With Videos

- **Today**
 - Video 4.6 of **Lesson 4**
 - **Lesson 5:** Function Defs
- Next Time
 - **Lesson 6:** Strings



Academic Integrity Quiz

- **Remember:** quiz about the course AI policy
 - Have posted grades for completed quizzes
 - Right now, missing ~14 enrolled students
 - If did not receive 9/10 (~150 students), take it again
- If you are not aware of the quiz
 - Go to <http://www.cs.cornell.edu/courses/cs1110/>
 - Click **Academic Integrity** under **Assessments**
 - Read and take quiz in CMS

An Extended Example

Function Definition

```
1 def foo(a,b):  
2     """Return something  
3     Param x: a number  
4     Param y: a number"""  
5     x = a  
6     y = b  
7     return x*y+y
```

Function Call

```
>>> x = foo(3,4)
```

What does the
frame look like
at the **start**?

Which One is Closest to Your Answer?

A:

| | | | |
|-----|---|---|---|
| foo | | 4 | |
| a | 3 | b | 4 |

B:

| | | | |
|-----|---|---|---|
| foo | | 5 | |
| a | 3 | b | 4 |

C:

| | | |
|-----|---|---|
| foo | | 5 |
| a | 3 | |

D:

| | | | |
|-----|---|---|---|
| foo | | 5 | |
| a | 3 | b | 4 |
| x | | y | |

Which One is Closest to Your Answer?

| | | | | | | | | | | | | | | | |
|---|-----|---|---|---|--|---|---|---|-----|---|---|---|---|---|---|
| <p>A:</p> <table border="1"><tr><td>foo</td><td></td><td>4</td></tr><tr><td>a</td><td>3</td><td>b</td><td>4</td></tr></table> | foo | | 4 | a | 3 | b | 4 | <p>B:</p> <table border="1"><tr><td>foo</td><td></td><td>5</td></tr><tr><td>a</td><td>3</td><td>b</td><td>4</td></tr></table> | foo | | 5 | a | 3 | b | 4 |
| foo | | 4 | | | | | | | | | | | | | |
| a | 3 | b | 4 | | | | | | | | | | | | |
| foo | | 5 | | | | | | | | | | | | | |
| a | 3 | b | 4 | | | | | | | | | | | | |
| <p>E:</p> <p>— _ (ツ) _ /</p> | | | | | | | | | | | | | | | |
| <p>C:</p> <table border="1"><tr><td>foo</td><td></td></tr><tr><td>a</td><td>3</td></tr></table> | foo | | a | 3 | <table border="1"><tr><td></td><td></td><td>5</td></tr><tr><td></td><td>b</td><td>4</td></tr><tr><td>x</td><td></td><td>y</td><td></td></tr></table> | | | 5 | | b | 4 | x | | y | |
| foo | | | | | | | | | | | | | | | |
| a | 3 | | | | | | | | | | | | | | |
| | | 5 | | | | | | | | | | | | | |
| | b | 4 | | | | | | | | | | | | | |
| x | | y | | | | | | | | | | | | | |

An Extended Example

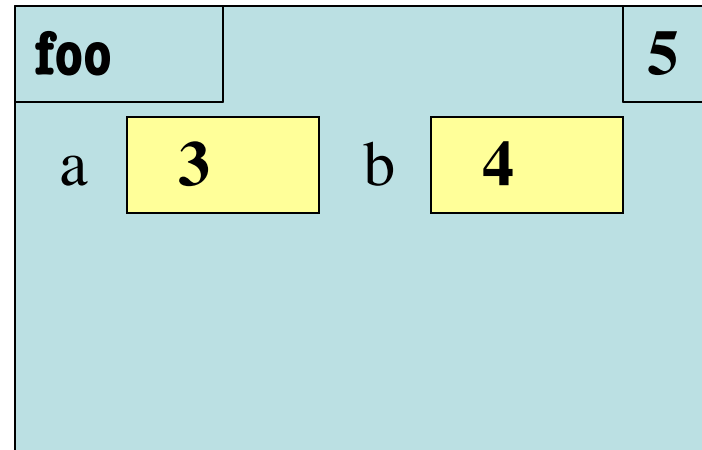
Function Definition

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2     """Return something
3     Param x: a number
4     Param y: a number"""
5     x = a
6     y = b
7     return x*y+y
```

Function Call

```
>>> x = foo(3,4)
```

B:



An Extended Example

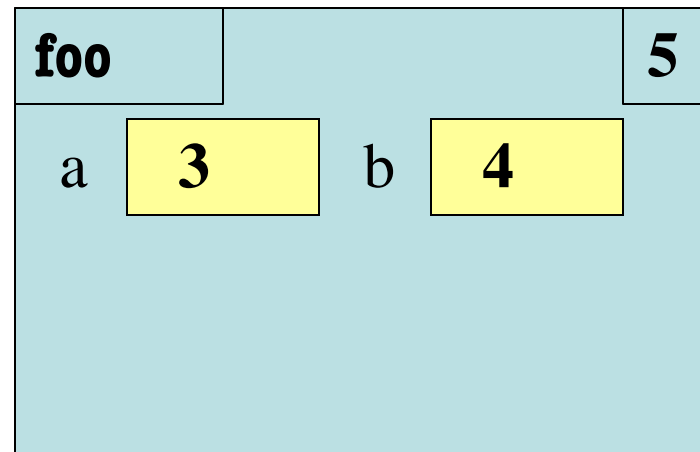
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Function Call

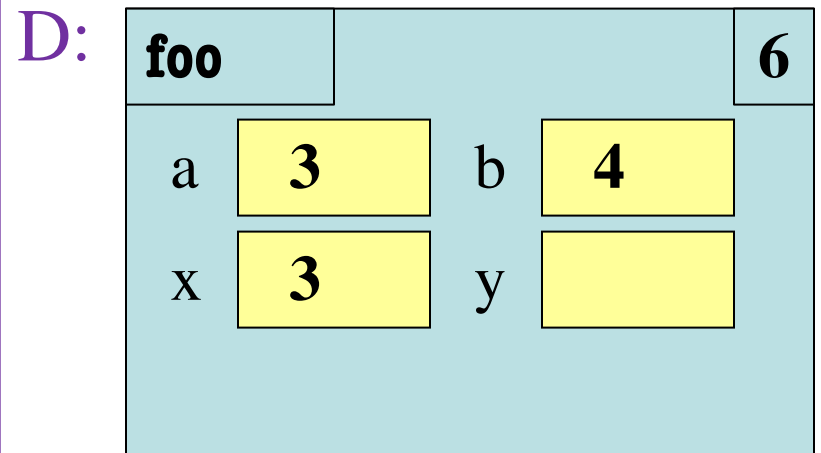
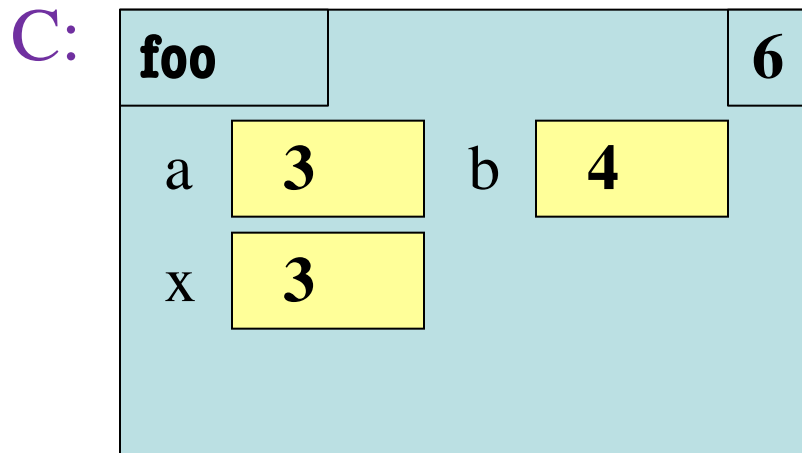
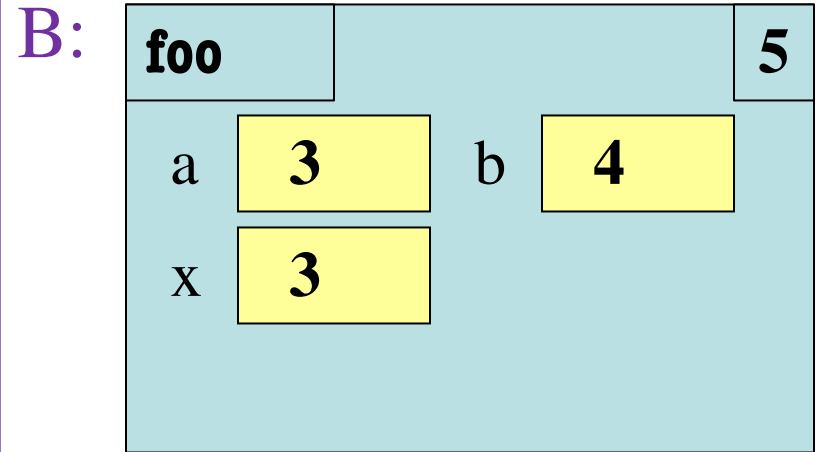
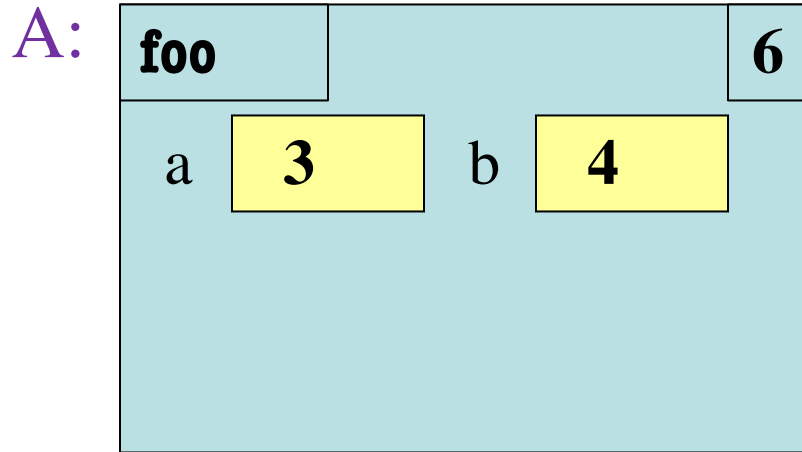
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B:



What is the **next step**?

Which One is Closest to Your Answer?



An Extended Example

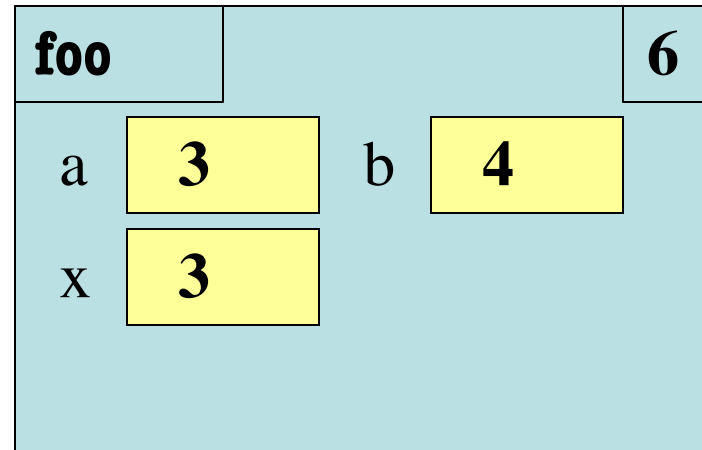
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Function Call

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>>> x = foo(3,4)
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C:



An Extended Example

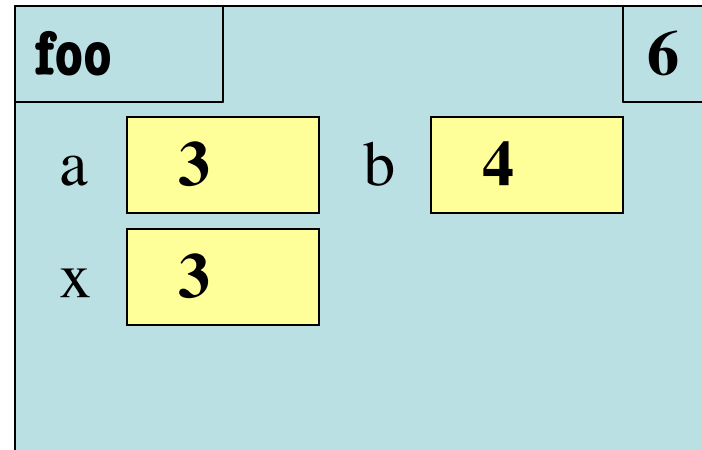
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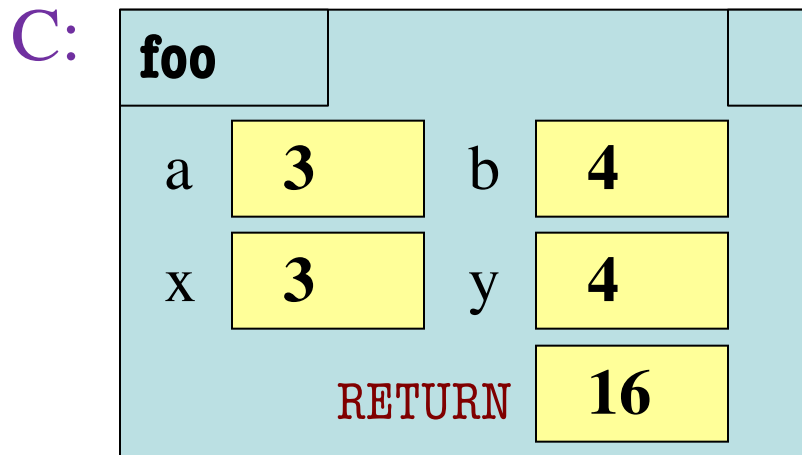
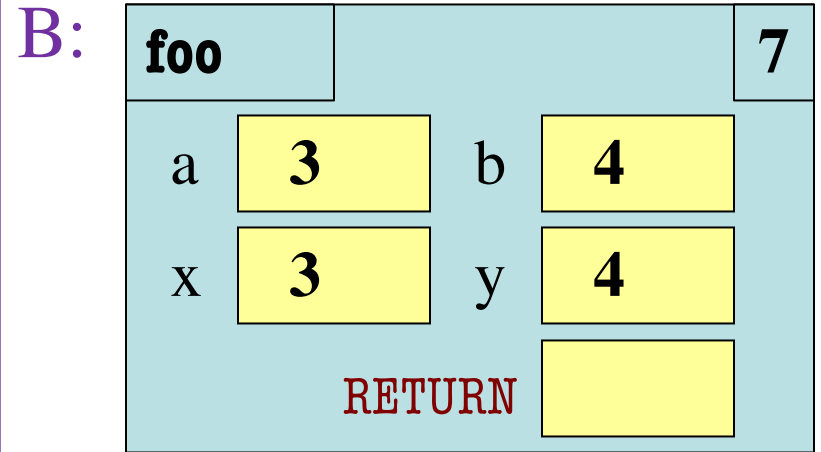
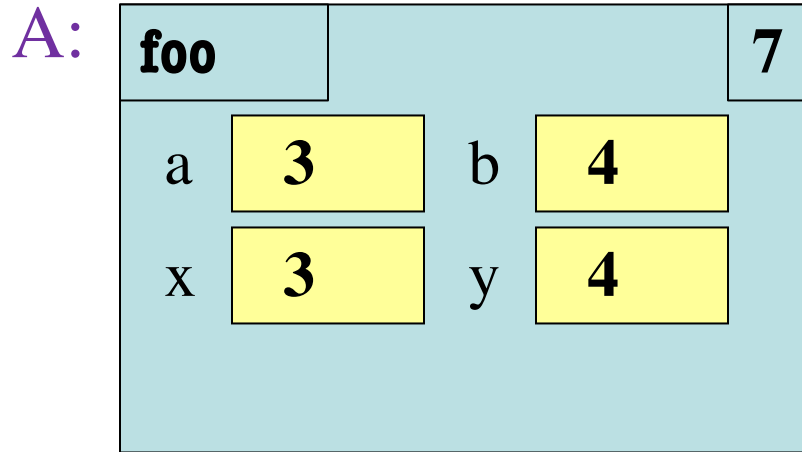
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Function Call

```
>>> x = foo(3,4)
```

A:

| | | | |
|------------|----------|---|----------|
| foo | | | 7 |
| a | 3 | b | 4 |
| x | 3 | y | 4 |

An Extended Example

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```
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Function Call

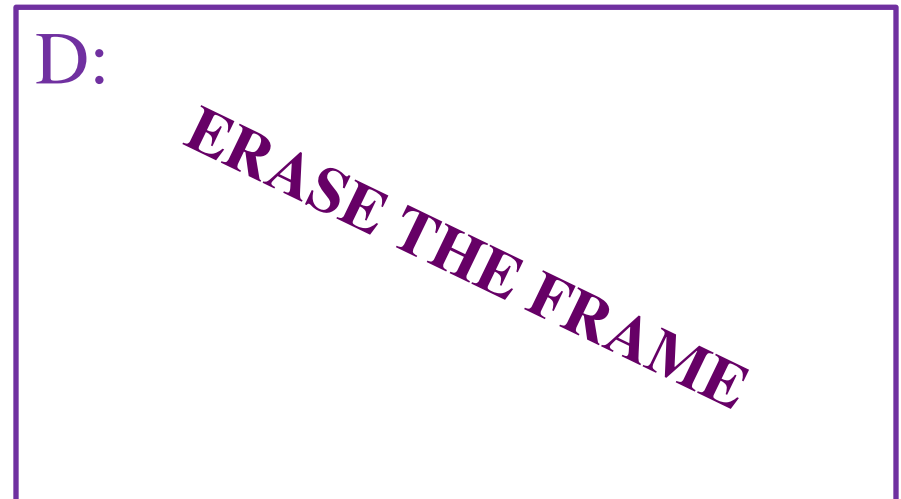
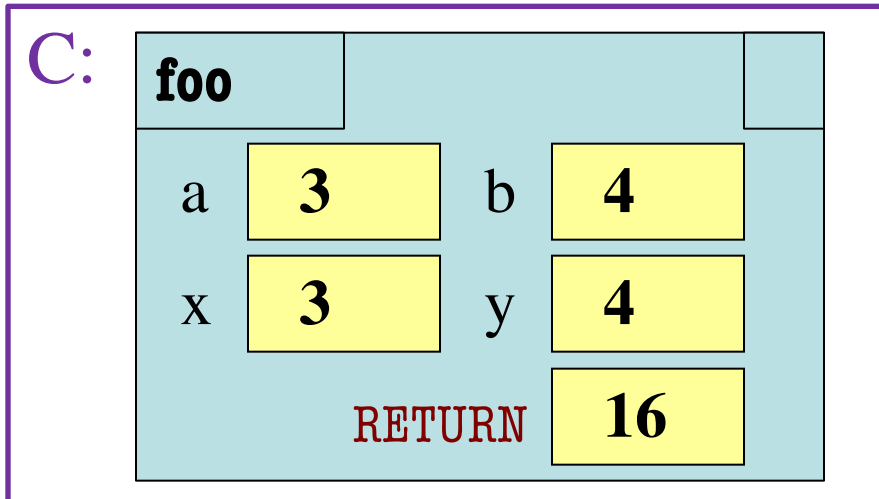
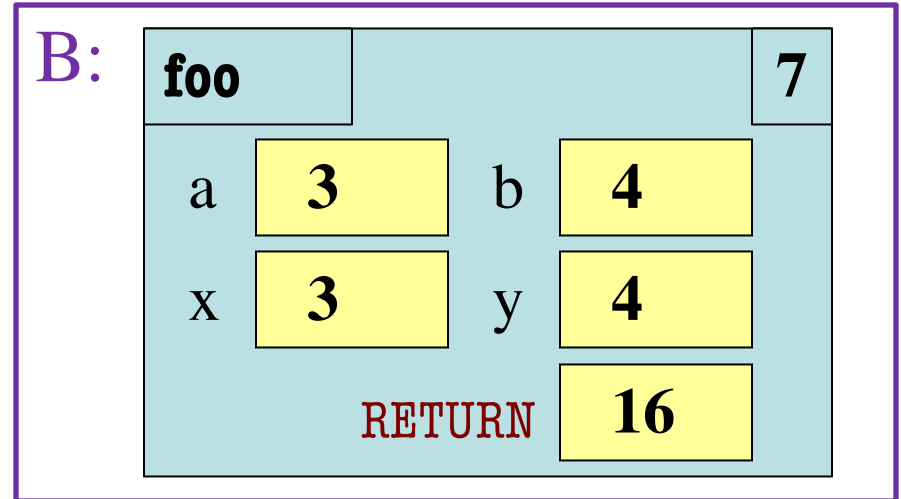
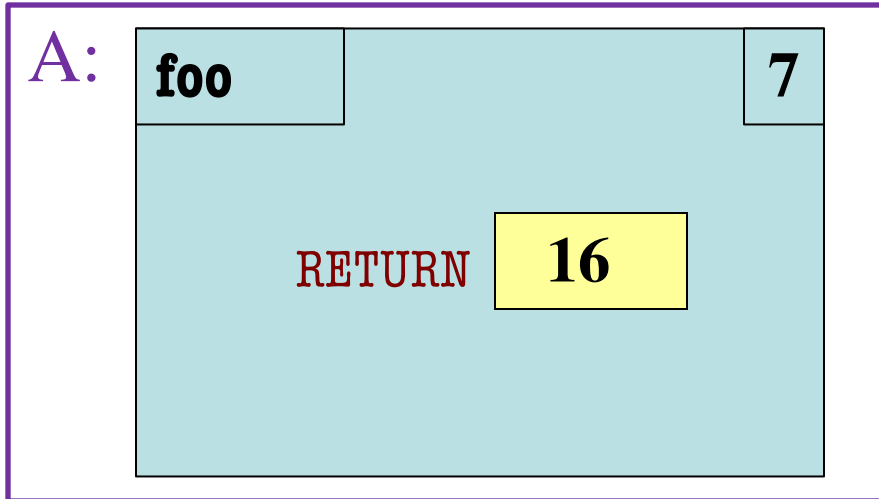
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A:

| | | | |
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An Extended Example

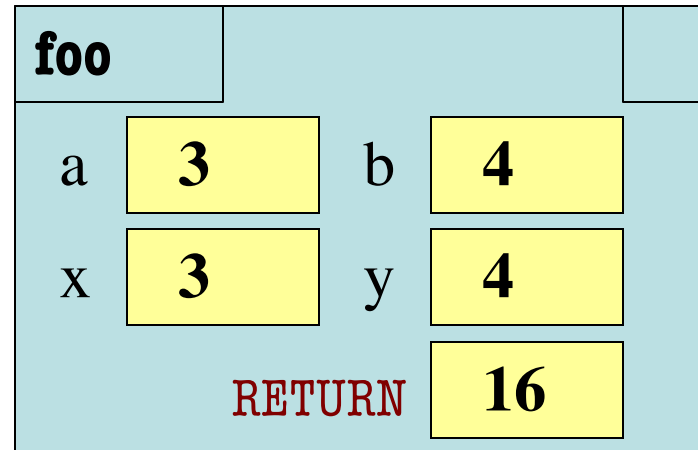
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C:



An Extended Example

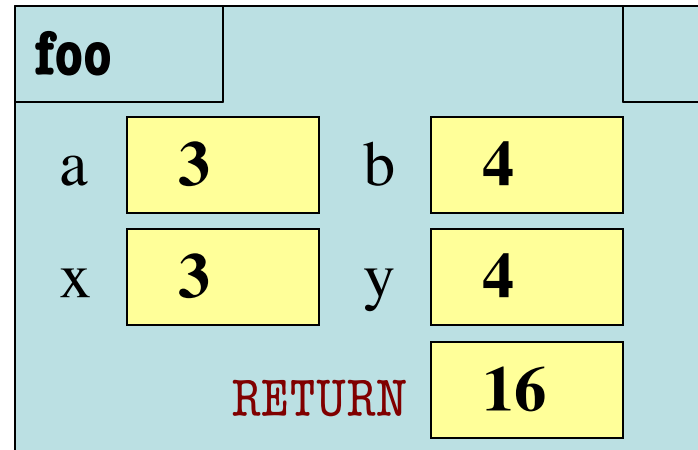
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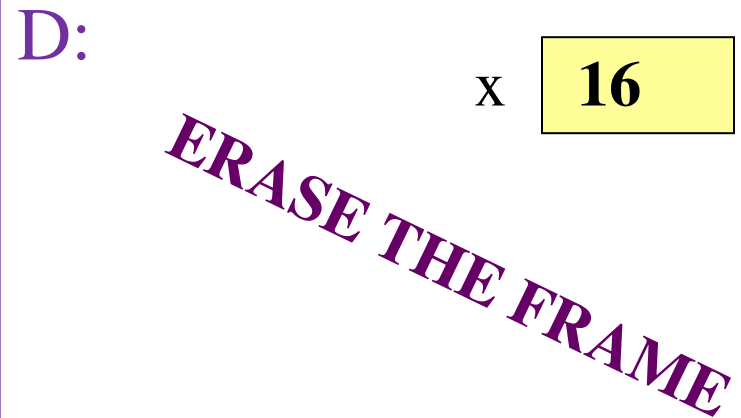
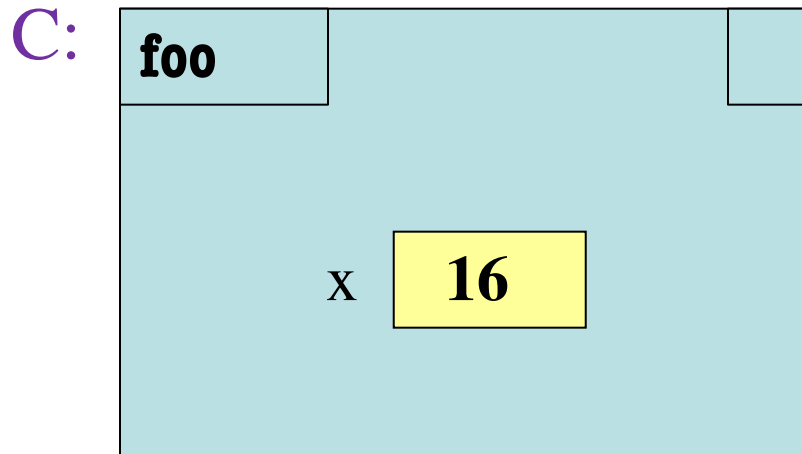
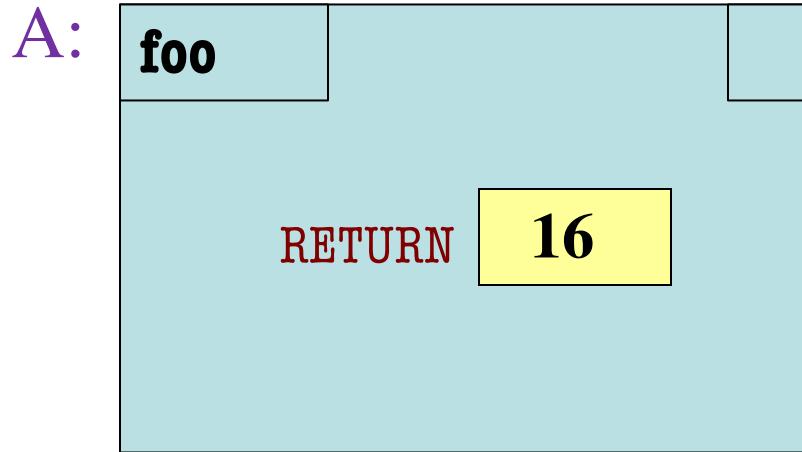
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D:

x

16

ERASE THE FRAME

An Extended Example

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Function Call

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D:

Variable in
global space

x

16

ERASE THE FRAME

Questions?