

## Another example

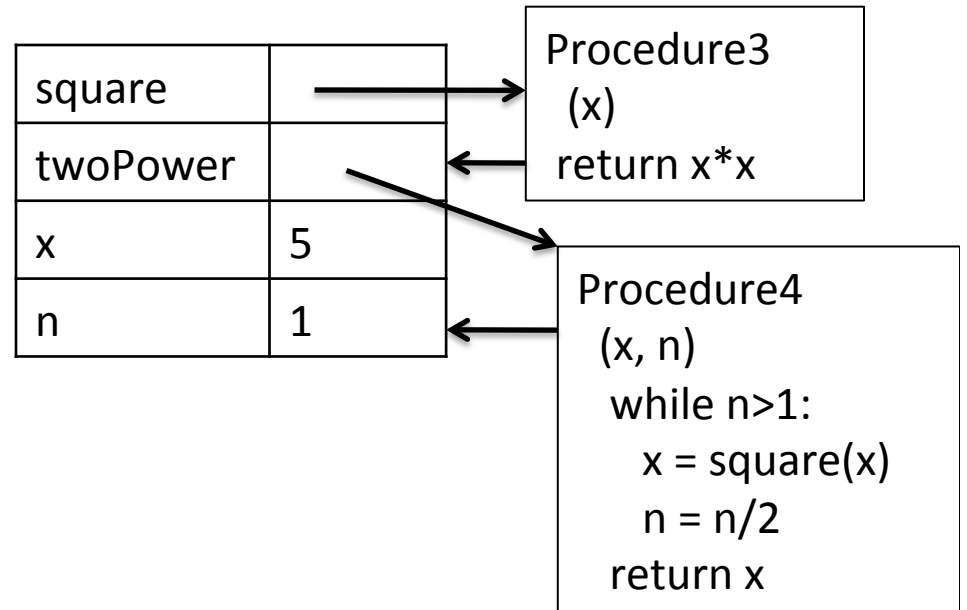
```
def square(x):  
    return x*x
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```
def twoPower(x, n):  
    while n > 1:  
        x = square(x)  
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    return x
```

# Let's try it out

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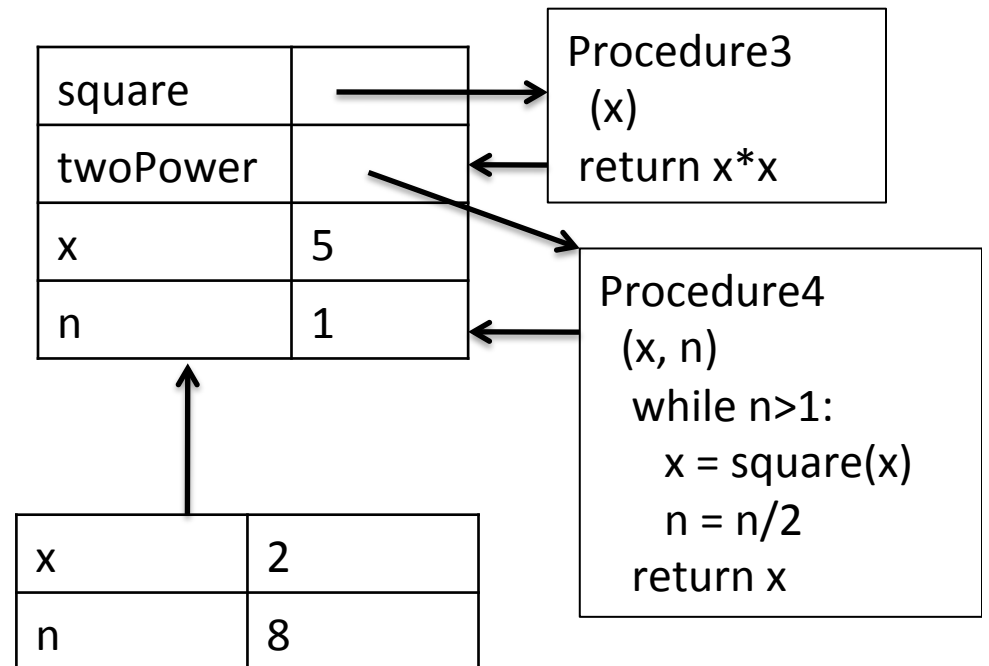
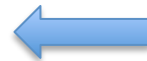
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x = 5  
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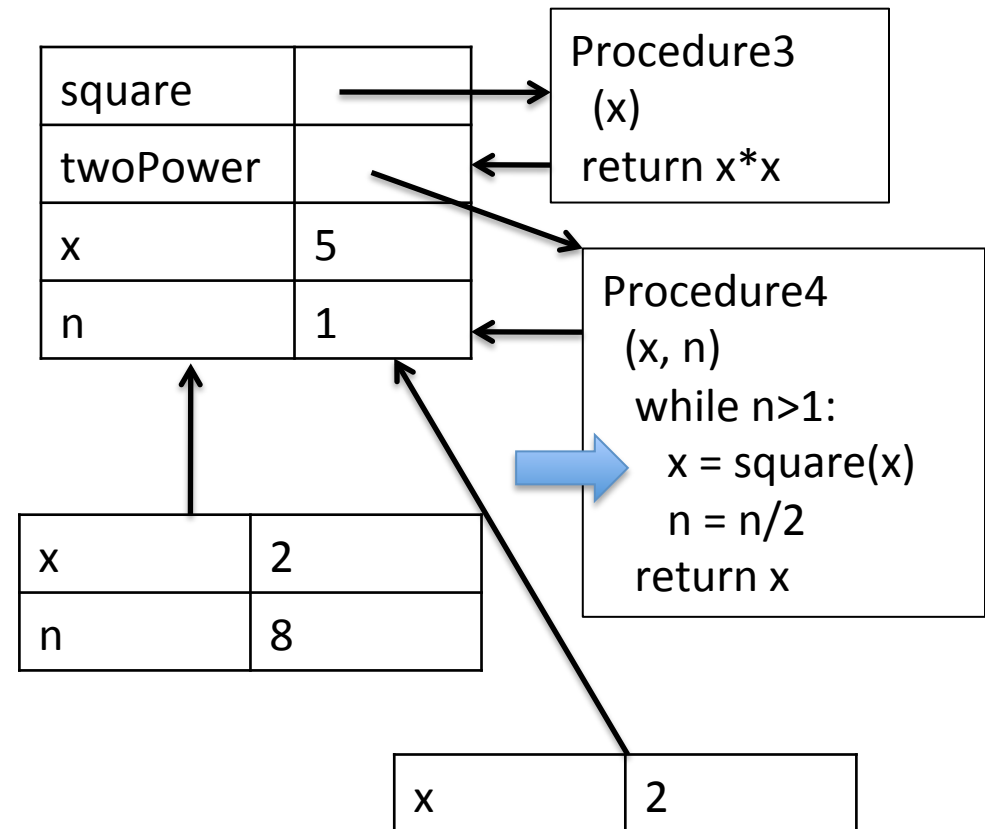


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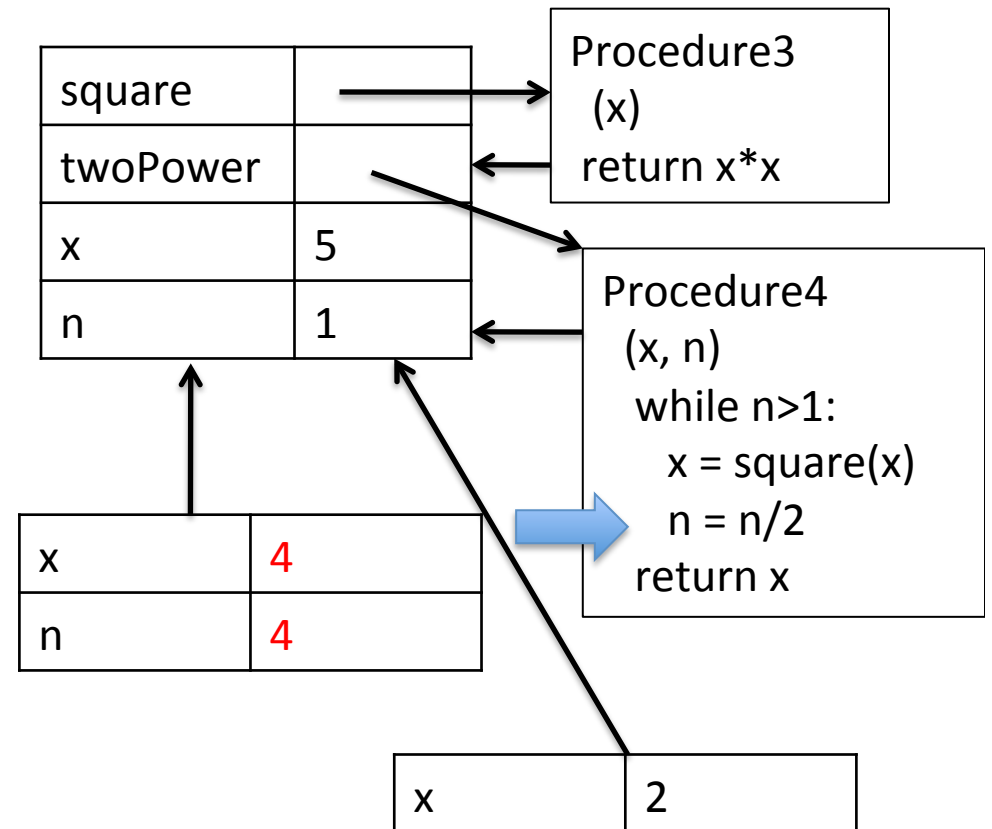
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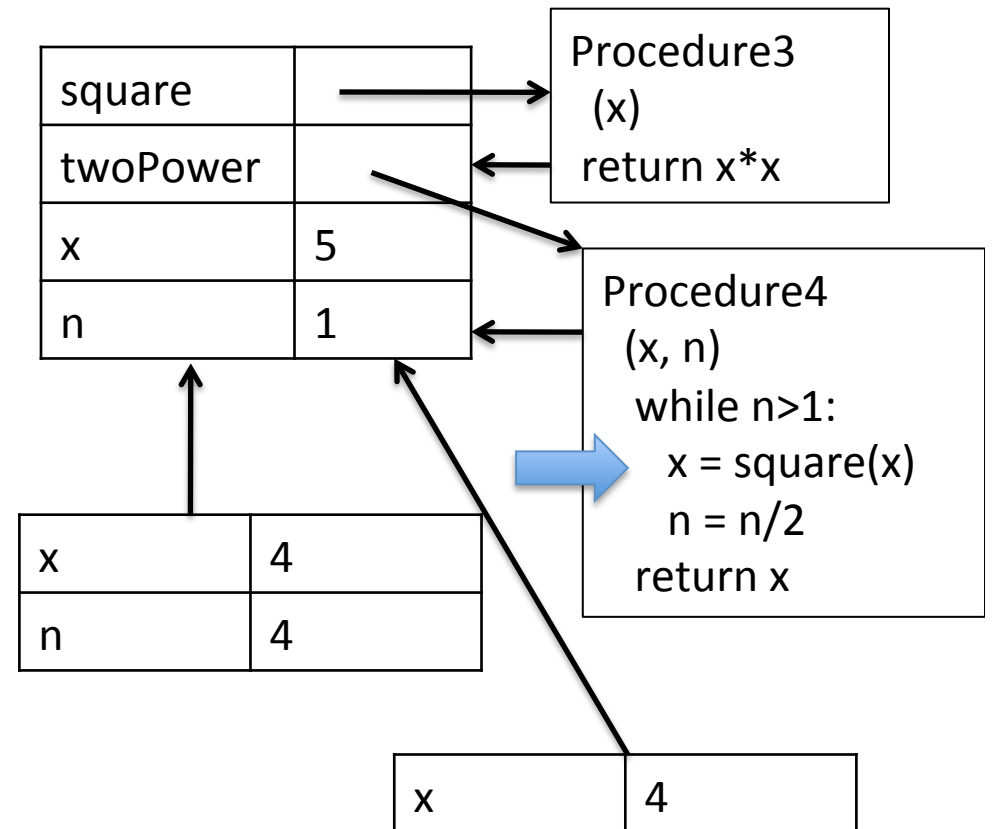


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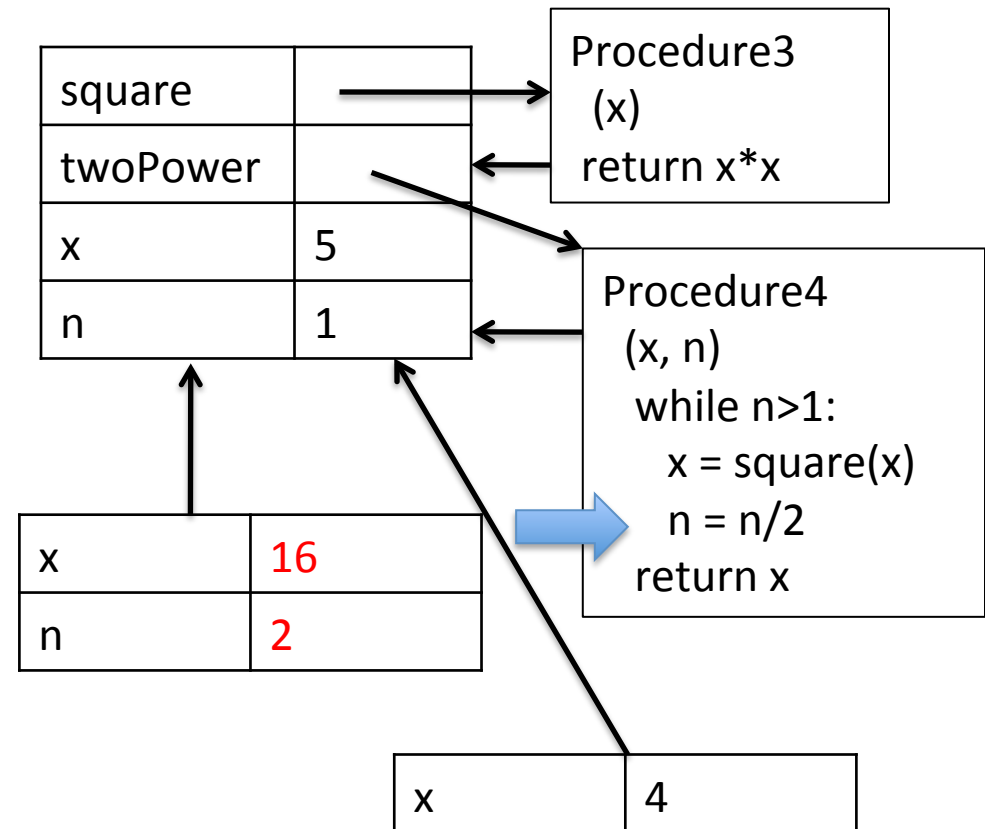


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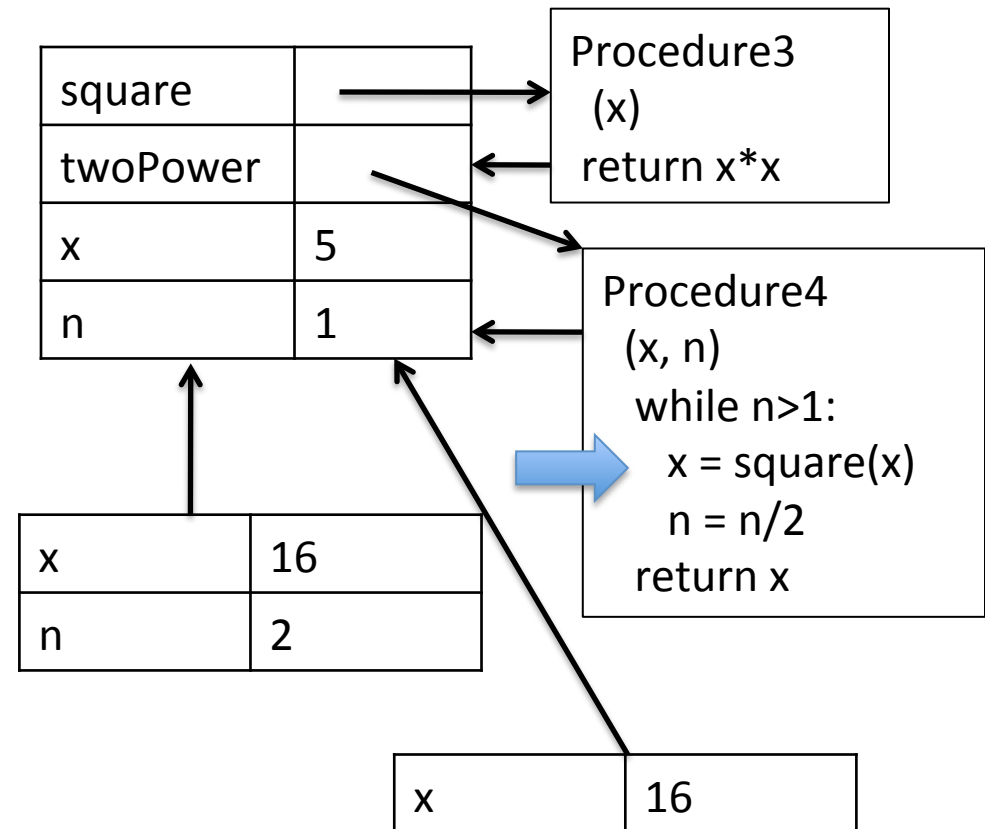


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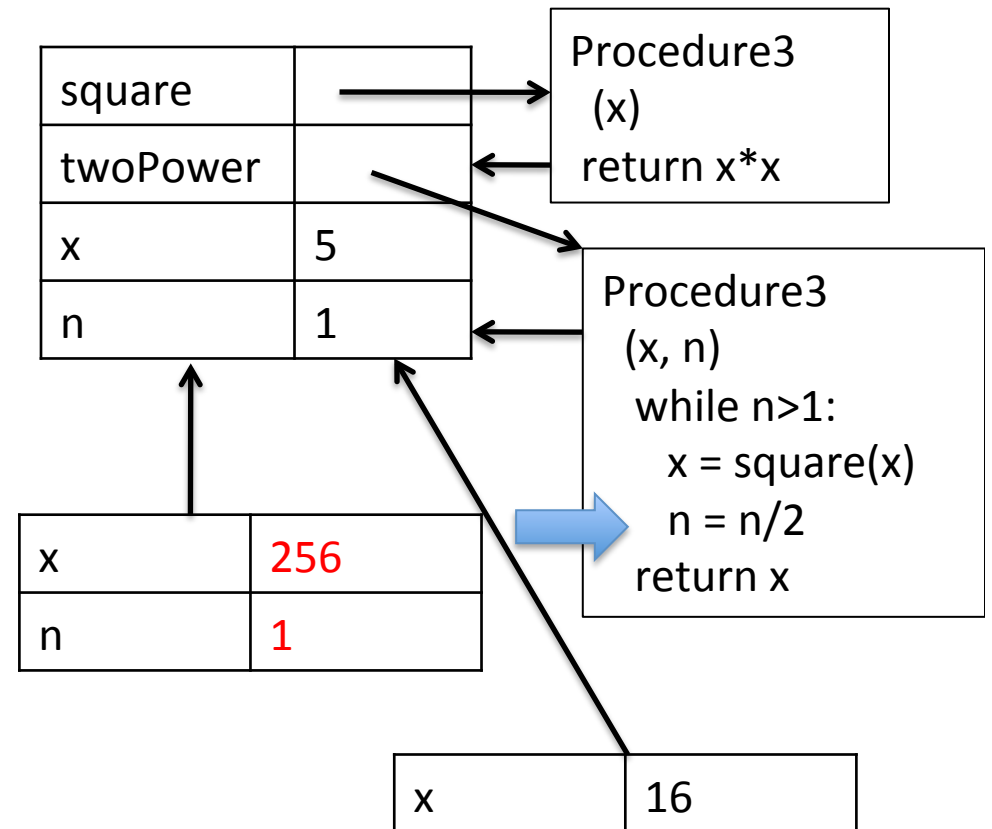


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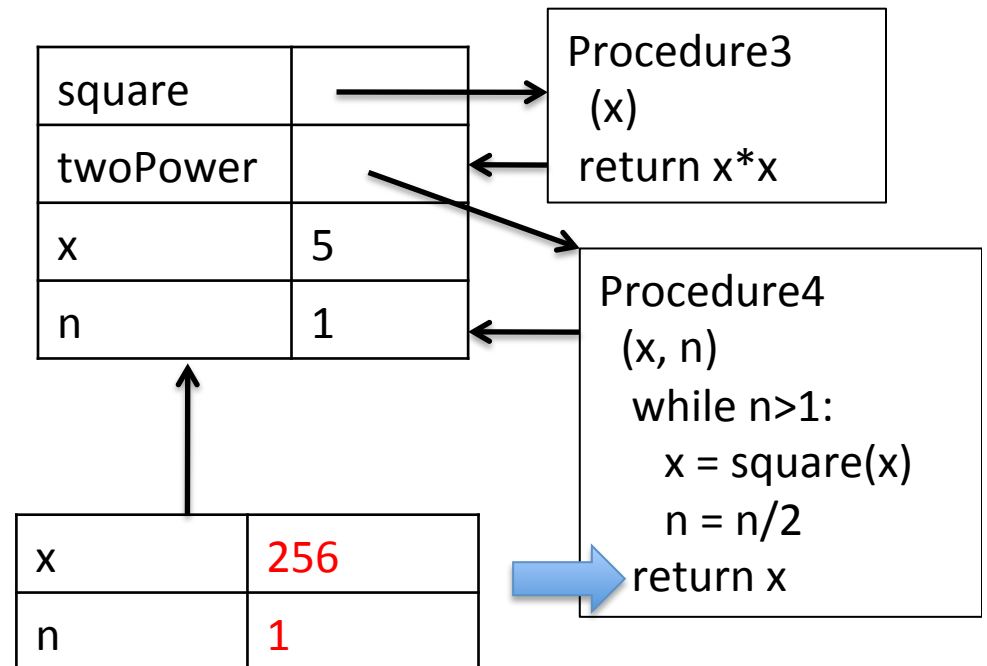
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256
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# Some observations

- Notice how each call to square created a new frame, with a local binding for x
- The value of x in the global environment was never confused with values within frames from function calls
- The value of x used by the call to square is different from the binding for x in the call to twoPower
- The rules we described can be followed mechanically to determine scoping of variables