


Question 3

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1/1 point (graded)

```
(define (foo x)
  (local [(define (bar y) (+ x y))]
    (+ x (bar (* 2 x)))))

(list (foo 2) (foo 3))
```



```
(list
  (local [(define (bar y) (+ 2 y))]
    (+ 2 (bar (* 2 2))))
  (foo 3))
```



```
(define (bar_0 y) (+ 2 y))
(list (+ 2 (bar_0 (* 2 2)))
      (foo 3))
```

What is the result of the next step of the evaluation?



```
(define (bar_0 (+ 2 y))
  (list (+ 2 (bar_0 4))
        (foo 3)))
```



```
(define (bar_0 (+ 2 y))
  (list (+ 2 (+ 2 4))
        (foo 3)))
```




```
(define (bar_0 (+ 2 y))
  (list (+ 2 (+ 2 (* 2 2)))
        (foo 3)))
```



Explanation

Before we replace the function call expression `(bar_0 (* 2 2))` with the body of the function, we must first evaluate the argument `(* 2 2)` to 4.

 Answers are displayed within the problem