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## Questions 2-5

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### Question 2


1/1 point (graded)


Our template with the new accumulator now looks like this. The places where `rsf` can be updated have been numbered 1 through 4:


```
(define (num-rooms r0)
  ;; todo is (listof Room); a worklist accumulator
  ;; visited is (listof String); context preserving acc, names of rooms visited
  ;; rsf is Natural; number of rooms visited so far
  (local [(define (fn-for-room r todo visited rsf)
    (if (member (room-name r) visited)
      (fn-for-lor todo visited 1 (... rsf))
      (fn-for-lor (append (room-exits r) todo)
        (cons (room-name r) visited)
        2 (... rsf))))
    (define (fn-for-lor todo visited rsf)
      (cond [(empty? todo) 3 (... rsf)]
            [else
             (fn-for-room (first todo)
                           (rest todo)
                           visited
                           4 (... rsf))]))])
  (fn-for-room r0 empty empty 0)))
```

What should replace `(... rsf)` in position 1?

 0

 rsf

 (sub1 rsf)

 (add1 rsf)



**Explanation**  
In this case, the curent room is already in `visited` so we have been there before. This means we have already counted it and should not count it again, so we just pass `rsf` to `fn-for-lor`.

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### Question 3


1/1 point (graded)

What should replace `(... rsf)` in position 2?

 0

 rsf

 (sub1 rsf)

 (add1 rsf)



**Explanation**  
In this case, we have not previously been to this room, so we need to add one to our count.

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### Question 4

1/1 point (graded)

What should replace `(... rsf)` in position 3?



0

rsf

(subl rsf)

(addl rsf)

#### Explanation

If `todo` is empty, then we have traversed the entire graph, and so we should return `rsf`, which will be the total number of rooms visited in the graph.

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### Question 5

1/1 point (graded)

What should replace `(... rsf)` in position 4?

0

rsf

(subl rsf)

(addl rsf)

#### Explanation

In this case, we have not yet visited `(first todo)` so nothing has changed in terms of how many rooms have been visited, and we should pass the current `rsf` to `fn-for-room`

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