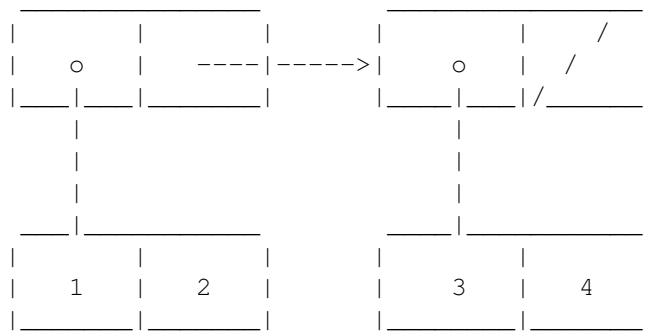


CSE 341 — Scheme dynamic scoping, improper lists, quasiquote Discussion Questions — Solutions

1. Draw a box-and-arrow picture for the value of `(squid . (clam . (octopus . ())))`
This is just `(squid clam octopus)`!
2. How would you write the following list structure in Scheme?



`'((1 . 2) (3 . 4))`

3. Given the following Scheme code:

```
(define n 0)

(define (get-n) n)

(define (squid) (get-n))

(define (octopus n) (squid))
```

what does `(squid)` evaluate to? 0

What does `(octopus 8)` evaluate to? 0

What would be the result in a dynamically scoped version of Scheme? 0 and 8

4. What is the value of `x`, `y`, and `z` after evaluating the following?

```
(define x `(clam))

(define y `(keep ,x))

(define z `(keep ,@x))
```

```
x => (clam)
y => (keep (clam))
z => (keep clam)
```