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?

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

3. Given the following Scheme code:

   ```scheme
   (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?

   ```scheme
   (define x `'clam))
   (define y `(keep ,x))
   (define z `(keep ,@x))
   ```

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