

1. (5 pts) Fill in the blanks below to complete the lambda translation of **let** in cylinder-volume, as shown in class.

```
(define (cylinder-volume radius height)
  (let ((area (* pi radius radius)))
    (* area height)))
```

```
(define (cylinder-volume radius height)
```

2. (5 pts) Rewrite the midpoint-segment function to reflect good data abstraction.

```
(define (midpoint-segment s)
```

```
;;;LINE SEGMENT layer ;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;
(define (midpoint-segment s)
  (center-point (car s) (cdr s)))
```

```
(define (print-segment s)
  (display "(")
  (print-point (start-segment s))
  (display ", ")
  (print-point (end-segment s))
  (display ")"))
```

```
;;;LINE SEGMENT Definition ;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;
(define (make-segment point1 point2) (cons p1 p2)) ;returns a segment
(define (start-segment s) (car s)) ;returns a point
(define (end-segment s) (cdr s)) ;returns a point
```

```
;;;POINT layer ;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;
(define (center-point p1 p2)
  (make-point (avg-rat (x-coord p1)
                       (x-coord p2))
              (avg-rat (y-coord p1)
                       (y-coord p2))))
```

```
(define (print-point p)
  (display "(")
  (print-rat-inline (x-coord p))
  (display ", ")
  (print-rat-inline (y-coord p))
  (display ")"))
```