Brandon London
4250-001
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Definitions:

```
#lang racket
;Brandon London
;Galina
(define (my_area n r)
  (cond
    ((= n 1) (* pi (* r r)))
    ((= n 2) (* (/ 4 3) pi (* r r r)))
    (else #f)))
(define (my_areab n r)
  (if (>= r 0)
      (if (exact-positive-integer? n)
          (if (= n 1)
              (* pi (* r r))
              (if (= n 2)
                  (* (/ 4 3) pi (* r r r))
                  #f))
          #f)
      #f))

(define (rem-second list)
  (if (>= (length list) 2)
      (cons (car list) (cdr (cdr list)))
      '()))

(define (my_union a b)
  (cond ((null? b) a)
        ((member (car b) a)
         (my_union a (cdr b)))
        (else (my_union (cons (car b) a) (cdr b)))))

(define (my_delete V L)
  (cond ((null? L) L)
        ((list? (car L))
         (cons (my_delete V (car L)) (my_delete V (cdr L))))
        ((equal? V (car L)) (my_delete V (cdr L)))
        (else (cons (car L) (my_delete V (cdr L))))))
```

Outputs:

```
Welcome to DrRacket, version 7.4 [3m].
Language: racket, with debugging; memory limit: 128 MB.
> (my_area 2 4)
268.082573106329
> (my_areab 2 4)
268.082573106329
> (rem-second '(1 2 3 4 5))
'(1 3 4 5)
> (rem-second '(1))
'()
> (my_union '(1 2 3) '(2 4 2))
'(4 1 2 3)
> (my_delete 3 '(1 2 3 (4 3) 5 (6 (3 (3 (3 (3 (3 4)))))) 8))
'(1 2 (4) 5 (6 ((((((4)))))) 8)
> (my_delete 3 '(1 2 3))
'(1 2)
> (my_delete 3 '(1))
'(1)
> (my_delete 3 '(1 3))
'(1)
> (my_delete 3 '())
'()
>
```