

## Questions 1-2

 [Bookmark this page](#)

From the previous section, we have the following:

```
;; ListOfNumber -> ListOfNumber
;; produce list with only postivie? elements of lon
(check-expect (positive-only empty) empty)
(check-expect (positive-only (list 1 -2 3 -4)) (list 1 3))

(define (positive-only lon) empty) ;stub

(define (positive-only lon)
  (filter2 positive? lon))

;; ListOfNumber -> ListOfNumber
;; produce list with only negative? elements of lon
(check-expect (negative-only empty) empty)
(check-expect (negative-only (list 1 -2 3 -4)) (list -2 -4))

(define (negative-only lon) empty) ;stub

(define (negative-only lon)
  (filter2 negative? lon))

(define (filter2 p lon)
  (cond [(empty? lon) empty]
        [else
         (if (p (first lon))
             (cons (first lon)
                   (filter2 p (rest lon)))
             (filter2 p (rest lon))))])
```

We will continue working on the design of this abstract function by completing the purpose and `check-expects` for `filter2`.

### Question 1

1/1 point (graded)

Select all correct check-expects that for `filter2`:


- ☐ `(check-expect (filter2 empty) empty)`
- ☒ `(check-expect (filter2 positive? empty) empty)`
- ☐ `(check-expect (negative-only (list 1 -5 5 -1)) (list -5 -1))`
- ☒ `(check-expect (filter2 negative? (list 1 -5 5 -1)) (list -5 -1))`
- ☐ `(check-expect (positive-only (list 1 -5 5 -1)) (list 1 5))`
- ☒ `(check-expect (filter2 positive? (list 1 -5 5 -1)) (list 1 5))`
- ☒ `(check-expect (filter2 false? (list false true false false true)) (list false false false))`



#### Explanation

`(check-expect (filter2 empty) empty)` is missing a parameter.  
The check-expects for `negative-only` and `positive-only` belong with those functions, not with `filter2`.

Submit

 Show Answer

 Answers are displayed within the problem

### Question 2

1/1 point (graded)

Select the best purpose for `filter2`:

- ☒ produce a list of only the positive or negative elements of `lon`

⌵ produce a list of only the positive elements of lon

⌵ given a list, produce a list of only the elements that satisfy the predicate p

⌵ produce a list of only the negative elements of lon



#### Explanation

The abstract function, `filter2` can be used in more ways than just the two functions we abstracted it from.

Submit

Show  
Answer

ⓘ Answers are displayed within the problem

⏪ Previous      Next ⏩

© ⓘ Ⓞ Ⓢ Ⓜ Some Rights Reserved



#### edX

About  
edX for Business

#### Legal

Terms of Service &  
Honor Code  
Privacy Policy  
Accessibility Policy

#### Connect

Blog  
Contact Us  
Help Center



© 2019 edX Inc. All rights reserved.  
| 深圳市恒宇博科技有限公司 粤ICP备17044299  
号-2