

## Questions 1-5

For all the questions on this page you should assume you are using Beginning Student Language with List Abbreviations.

### Question 1

1/1 point (graded)

What is the value produced by:

☐ (list "a" (string-append "b" "c") "d")

☒ (list "a" "bc" "d")

☐ (list "a" "b" "c" "d")

☐ (list "abcd")



#### Explanation

The result is the list (list "a" "bc" "d"), since (string-append "a" "b") evaluates to "ab".

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### Question 2

1/1 point (graded)

Given these two constant definitions:

```
(define L1 (list 2 3))  
(define L2 (list 4))
```

What is the value produced by:

☒ (list 1 2 3)

☐ (list 1 (list 2 3))

☐ (list 1 2 3 empty)

☐ (list 1 (list 2 3 empty) empty)



#### Explanation

(cons 1 L1) produces a new list by adding 1 to the front of the value of L1.

In BSL without list abbreviations DrRacket shows us this value as (cons 1 (cons 2 (cons 3 empty))) but with list abbreviations turned on we see it as (list 1 2 3).

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### Question 3

1/1 point (graded)

Given these two constant definitions:

```
(define L1 (list 2 3))  
(define L2 (list 4))
```

What is the value produced by:

☐ (list 1 2 3)

☒ (list 1 (list 2 3))

☐ (list 1 2 3 empty)

☐ (list 1 (list 2 3 empty) empty)



#### Explanation

(list 1 L1) produces a new list with 1 as the first element and the value of L1 as the second element.

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#### Question 4

1/1 point (graded)

Given these constant definitions:

```
(define L1 (list 2 3))  
(define L2 (list 4))
```

What is the value produced by:

(append L1 L2)

☒ (list 2 3 4)

☐ (list 4 2 3)

☐ (list 2 3 (list 4))

☐ (list 4 (list 2 3))



#### Explanation

append combines the elements of the two lists together into a single list.

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#### Question 5

1/1 point (graded)

Why are we getting the following error?

```
(append L1 2)
```

Welcome to [DrRacket](#), version 5.3.4 [3m].  
Language: Beginning Student with List Abbreviations; memory limit: 128 MB.  
*append: last argument must be a list, but received 2*

☐ We should use (append 2 L1) instead

☐ We should use (cons L1 2) instead

☒ All the arguments to append must be lists, but 2 is a number

☐ DrRacket doesn't like the list notation



#### Explanation

append does not combine elements and lists. Instead of (append L1 2) we could write (append L1 (list 2))

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