



**Notice:** the code samples and (possible) answers on this page are written using Haskell syntax. If you did the lab in one of the other languages, you have to manually translate the given code samples and (possible) answers to the language you have used to solve the programming exercises. Unfortunately, the edX tools do not allow us to have separate question sheets for every language. We hope to improve this experience in the future but for now this is what we have to live with.

### QUESTION 0 (1/1 point)

What is the result of `toDigits 12321` ?

- ☐ [0, 1, 2, 3, 2, 1]
- ☐ [1, 2, 3, 2, 1, 0]
- ☒ [1, 2, 3, 2, 1]
- ☐ The computation will not compile, will not terminate, or will throw an Exception

*You have used 1 of 1 submissions*

### QUESTION 1 (1/1 point)

What is the result of `toDigits (-531)` ?

- ☐ []
- ☐ [-5, 3, 1]
- ☐ [-5, -3, -1]
- ☒ The computation will not compile, will not terminate, or will throw an Exception

*You have used 1 of 1 submissions*

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**QUESTION 2** (1/1 point)

What is the result of `toDigits 7.6` ?

- ☒ The computation will not compile, will not terminate, or will throw an Exception
- ☐ [7, 6]
- ☐ [7]
- ☐ []

*You have used 1 of 1 submissions*

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**QUESTION 3** (1/1 point)

What is the result of `toDigits 0` ?

- ☐ []
- ☒ [0]
- ☐ The computation will not compile, will not terminate, or will throw an Exception
- ☐ "0"

*You have used 1 of 1 submissions*

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**QUESTION 4** (1 point possible)

What is the result of `toDigits "123"`?

- ☐ []
- ☐ [1, 2, 3]

- ☐ ['1', '2', '3']
- ☒ The computation will not compile, will not terminate, or will throw an Exception

*You have used 1 of 1 submissions*

### QUESTION 5 (1/1 point)

What is the result of `toDigits 666` ?

- ☒ [6, 6, 6]
- ☐ [6, 6]
- ☐ [6]
- ☐ The computation will not compile, will not terminate, or will throw an Exception

*You have used 1 of 1 submissions*

### QUESTION 6 (1/1 point)

What is the result of `toDigitsRev 12321` ?

- ☒ [1, 2, 3, 2, 1]
- ☐ [0, 1, 2, 3, 2, 1]
- ☐ [1, 2, 3, 2, 1, 0]
- ☐ The computation will not compile, will not terminate, or will throw an Exception

*You have used 1 of 1 submissions*

## QUESTION 7 (1/1 point)

What is the result of `toDigitsRev (-531)` ?

- ☒ The computation will not compile, will not terminate, or will throw an Exception
- ☐ []
- ☐ [1, 3, -5]
- ☐ [-1, -3, -5]

*You have used 1 of 1 submissions*

## QUESTION 8 (1/1 point)

What is the result of `toDigitsRev 7.6` ?

- ☐ [6, 7]
- ☐ [6]
- ☐ []
- ☒ The computation will not compile, will not terminate, or will throw an Exception

*You have used 1 of 1 submissions*

## QUESTION 9 (1/1 point)

What is the result of `toDigitsRev 0` ?

- ☐ []
- ☐ The computation will not compile, will not terminate, or will throw an Exception
- ☒ [0]

☐ ['0']

*You have used 1 of 1 submissions*

### QUESTION 10 (1/1 point)

What is the result of `toDigitsRev "123"`

☒ The computation will not compile, will not terminate, or will throw an Exception

☐ [3, 2, 1]

☐ ['3', '2', '1']

☐ []

*You have used 1 of 1 submissions*

### QUESTION 11 (1/1 point)

What is the result of `toDigitsRev 666`?

☐ [6]

☐ [6, 6]

☒ [6, 6, 6]

☐ The computation will not compile, will not terminate, or will throw an Exception

*You have used 1 of 1 submissions*

### QUESTION 12 (1/1 point)

What is the result of `doubleSecond []`?

☐ The computation will not compile, will not terminate, or will throw an Exception

☐ ""

☒ []

☐ 0

*You have used 1 of 1 submissions*

### QUESTION 13 (1/1 point)

What is the result of `doubleSecond [5]` ?

☒ [5]

☐ [10]

☐ [1, 0]

☐ 5

*You have used 1 of 1 submissions*

### QUESTION 14 (1/1 point)

What is the result of `doubleSecond [2, 5]` ?

☐ [4, 5]

☒ [2, 10]

☐ [4, 10]

☐ [2, 1, 0]

*You have used 1 of 1 submissions*

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### QUESTION 15 (1/1 point)

What is the result of `doubleSecond [1..]` ?

☐ [2, 2, 6, 4, ...]

☐ [2, 4, 6, 8, ...]

☐ [1, 2, 3, 4, ...]

☒ [1, 4, 3, 8, ...]

*You have used 1 of 1 submissions*

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### QUESTION 16 (1/1 point)

What is the result of `doubleSecond [1, 0, 1, 0, 1]` ?

☒ [1, 0, 1, 0, 1]

☐ [2, 0, 2, 0, 2]

☐ [2, 1, 2, 1, 2]

☐ The computation will not compile, will not terminate, or will throw an Exception

*You have used 1 of 1 submissions*

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### QUESTION 17 (1/1 point)

For this question, fill in the correct result. If the computation will not compile, will not terminate, or will throw an Exception, type in: BOTTOM

What is the result of `sumDigits []`



*You have used 1 of 1 submissions*

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### QUESTION 18 (1 point possible)

For this question, fill in the correct result. If the computation will not compile, will not terminate, or will throw an Exception, type in: BOTTOM

What is the result of sumDigits [-12, 12]

*You have used 1 of 1 submissions*

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### QUESTION 19 (1/1 point)

For this question, fill in the correct result. If the computation will not compile, will not terminate, or will throw an Exception, type in: BOTTOM

What is the result of sumDigits [0, 0, 0]



*You have used 1 of 1 submissions*

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### QUESTION 20 (1/1 point)

For this question, fill in the correct result. If the computation will not compile, will not terminate, or will throw an Exception, type in: BOTTOM

What is the result of sumDigits [6, 66, 666]



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*You have used 1 of 1 submissions*

### QUESTION 21 (1/1 point)

For this question, fill in the correct result. If the computation will not compile, will not terminate, or will throw an Exception, type in: BOTTOM

What is the result of sumDigits [1, 3 ..]

BOTTOM



*You have used 1 of 1 submissions*

### QUESTION 22 (1/1 point)

What is the result of `isValid (-12786592316)` ?

☐ True☐ False☒ The computation will not compile, will not terminate, or will throw an Exception☐ Nothing

*You have used 1 of 1 submissions*

### QUESTION 23 (1/1 point)

What is the result of `isValid 231753.65121` ?

☐ True

- ☐ False
- ☒ The computation will not compile, will not terminate, or will throw an Exception
- ☐ Nothing

*You have used 1 of 1 submissions*

### QUESTION 24 (1 point possible)

What is the result of `isValid 5256283618614517` ?

- ☒ True
- ☐ False
- ☐ The computation will not compile, will not terminate, or will throw an Exception
- ☐ Nothing

*You have used 1 of 1 submissions*

### QUESTION 25 (1/1 point)

What is the result of `isValid 4556945538735694` ?

- ☐ True
- ☒ False
- ☐ The computation will not compile, will not terminate, or will throw an Exception
- ☐ Nothing

*You have used 1 of 1 submissions*

**QUESTION 26** (1 point possible)

What is the result of `isValid 0000000000000000` ?

- ☒ True
- ☐ False
- ☐ The computation will not compile, will not terminate, or will throw an Exception
- ☐ Nothing

*You have used 1 of 1 submissions*

**QUESTION 27** (1/1 point)

The template for this lab provides the function `numValid`, together with a list of credit card numbers `creditcards`.

What is the result of: `numValid creditcards` ?

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*You have used 1 of 1 submissions*

**BONUS EXERCISE**

Which of the provided languages did you use to solve this lab?

*Note that this question is not graded.*

- ☒ Haskell ✓
- ☐ Frege

☐ F#☐ Groovy☐ Java☐ Scala

*You have used 1 of 1 submissions*

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