


Discussion 3: Lists and HOFs

Domain and Range

1. Determine the domain and range of the following Snap! blocks:

a.  Domain: _____, _____




Range: _____

b.  Domain of foo: _____

Range of foo: _____

Data type of var: _____

2. Fill in the table with the domain and range of the following higher order functions:

Higher Order Function	Domain	Range	Notes
			
			
			

Higher Order Function Practice

1. Fill in the blanks so the keep block returns a list of the numbers from MyList.

MyList = [3, hello, goodbye, 5, 6]

Keep items such that _____ from _____

2. Write an expression that returns the sum of the squares of the numbers in YourList.

YourList = [1, 2, 3, 4]

3. Complete the following block so it works as described. Note: You may find the sentence -> list block helpful.

4. What does the following block output? OurList is a list of words.

Challenge

1. For the following questions, which higher order functions can you use to get the desired output?

a. Given the following list:

Output:

- Map only
 Keep only
 Map and Keep
 None of the above

b. Given: A list of lists containing one letter and one number (they needn't appear in the same order)
 Output: The max number from all of the lists

- Map Only
 Keep Only
 Combine Only
 Map & Combine
 Keep & Combine
 Map & Keep
 Map, Keep, & Combine
 None of the above

2. Given a list of rooms, and a list of time slots, use HOFs return a list of rooms that are free during one of the given time slots. You are given a helper function, `when is free`, that takes in a room number and outputs when that room is free. Note: Each room is free at exactly one time.
