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Playing a Hand

(15/15 points)

In `ps4a.py`, note that in the function `playHand`, there is a bunch of *pseudocode*. This pseudocode is provided to help guide you in writing your function. Check out the Why Pseudocode? resource to learn more about the What and Why of Pseudocode before you start coding your solution.

Note: Do **not** assume that there will always be 7 letters in a hand! The parameter `n` represents the size of the hand.

Testing: Before testing your code in the answer box, try out your implementation as if you were playing the game. Here is some example output of `playHand`:

Test Cases

Case #1
Function Call:

```
wordList = loadWords()
playHand({'h':1, 'i':1, 'c':1, 'z':1, 'm':2, 'a':1}, wordList, 7)
```

Output:

```
  Current Hand:  a c i h m m z
  Enter word, or a "." to indicate that you are finished: him
  "him" earned 24 points. Total: 24 points

  Current Hand:  a c m z
  Enter word, or a "." to indicate that you are finished: cam
  "cam" earned 21 points. Total: 45 points

  Current Hand:  z
  Enter word, or a "." to indicate that you are finished: .
  Goodbye! Total score: 45 points.
```

Case #2
Function Call:

```
wordList = loadWords()
playHand({'w':1, 's':1, 't':2, 'a':1, 'o':1, 'f':1}, wordList, 7)
```

Output:

```
  Current Hand:  a s t t w f o
  Enter word, or a "." to indicate that you are finished: tow
  "tow" earned 18 points. Total: 18 points
```

```
Current Hand:  a s t f
Enter word, or a "." to indicate that you are finished: tasf
Invalid word, please try again.

Current Hand:  a s t f
Enter word, or a "." to indicate that you are finished: fast
"fast" earned 28 points. Total: 46 points

Run out of letters. Total score: 46 points.
```

Case #3
Function Call:

```
wordList = loadWords()
playHand({'n':1, 'e':1, 't':1, 'a':1, 'r':1, 'i':2}, wordList, 7)
```

Output:

```
Current Hand: a r e t i i n
Enter word, or a "." to indicate that you are finished: inertia
"inertia" earned 99 points. Total: 99 points

Run out of letters. Total score: 99 points.
```

Additional Testing
Be sure that, in addition to the listed tests, you test the same basic test conditions with varying values of n. n will never be smaller than the number of letters in the hand.

Function call: playHand({'a': 1, 'c': 1, 'r': 2, 't': 1, 'o': 1},'', 6)

```
Test 1: Using all the letters in the hand on the first guess
```

Output:

```
    Current Hand:  a c r r t o
    Enter word, or a "." to indicate that you are finished: carrot
    "carrot" earned 98 points. Total: 98 points

    Run out of letters. Total score: 98 points.
    None
```

Function call: playHand({'a': 1, 'z': 1}, '', 2)

```
Test 2: Guessing incorrectly, then correctly
```

Output:

```
    Current Hand:  a z
    Enter word, or a "." to indicate that you are finished: zo
    Invalid word, please try again.
```

```
Current Hand:  a z
Enter word, or a "." to indicate that you are finished: za
"za" earned 72 points. Total: 72 points

Run out of letters. Total score: 72 points.
None
```

Function call: playHand({'q': 1, 'i': 1, 'o': 1}, ', 3)

```
Test 3: Guessing word, then quitting
```

Output:

```
Current Hand:  q i o
Enter word, or a "." to indicate that you are finished: qi
"qi" earned 22 points. Total: 22 points

Current Hand:  o
Enter word, or a "." to indicate that you are finished: .
Goodbye! Total score: 22 points.
None
```

Function call: playHand({'y': 1, 'x': 2, 's': 1, 'z': 2, 'b': 1}, '', 7)

```
Test 4: Can't make a word :(
```

Output:

```
Current Hand:  y x x s z z b
Enter word, or a "." to indicate that you are finished: .
Goodbye! Total score: 0 points.
None
```

Function call: playHand({'a': 2, 'p': 1, 'r': 1, 'e': 2, 't': 1}, '', 7)

```
Test 5: Full hand transcript - using all letters
```

Output:

```
Current Hand:  a a p r e e t
Enter word, or a "." to indicate that you are finished: pear
"pear" earned 24 points. Total: 24 points

Current Hand:  a e t
Enter word, or a "." to indicate that you are finished: tea
"tea" earned 9 points. Total: 33 points

Run out of letters. Total score: 33 points.
None
```

Function call: playHand({'a': 2, 'p': 2, 'r': 1, 'z': 1, 'e': 1},'', 7)

```
Test 6: Full hand transcript - can't use every letter
```

Output:

```
Current Hand:  a a p p r z e
Enter word, or a "." to indicate that you are finished: pear
"pear" earned 24 points. Total: 24 points

Current Hand:  a p z
Enter word, or a "." to indicate that you are finished: za
"za" earned 22 points. Total: 46 points

Current Hand:  p
Enter word, or a "." to indicate that you are finished: p
Invalid word, please try again.

Current Hand:  p
Enter word, or a "." to indicate that you are finished: .
Goodbye! Total score: 46 points.
None
```

Function call: playHand({'a': 1, 'e': 1, 'd': 1, 'i': 1, 'k': 1, 'o': 1, 'n': 2, 'v': 1, 'z': 1},';', 10)

```
Test 7: Randomized Test
```

Output:

```
Current Hand:  a e d i k o n n v z
Enter word, or a "." to indicate that you are finished: n
Invalid word, please try again.

Current Hand:  a e d i k o n n v z
Enter word, or a "." to indicate that you are finished: chayote
Invalid word, please try again.

Current Hand:  a e d i k o n n v z
Enter word, or a "." to indicate that you are finished: kwijibo
Invalid word, please try again.

Current Hand:  a e d i k o n n v z
Enter word, or a "." to indicate that you are finished: daikon
"daikon" earned 66 points. Total: 66 points

Current Hand:  e n v z
Enter word, or a "." to indicate that you are finished: .
Goodbye! Total score: 66 points.
None
```