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Solution: Defining Functions

Quiz Solution: Population Density Function

```
def population_density(population, land_area):  
    return population/land_area  
  
# test cases for your function  
test1 = population_density(10, 1)  
expected_result1 = 10  
print("expected result: {}, actual result: {}".format(expected_result1, test1))  
  
test2 = population_density(864816, 121.4)  
expected_result2 = 7123.6902801  
print("expected result: {}, actual result: {}".format(expected_result2, test2))
```

Output:

```
expected result: 10, actual result: 10.0  
expected result: 7123.6902801, actual result: 7123.690280065897
```

I used a one-line function body because my personal preference is to keep my functions brief, as long as it doesn't make the code confusing. You could also perform the calculation on its own line separate from the return statement.

Quiz Solution:

```
def readable_timedelta(days):  
    # use integer division to get the number of weeks  
    weeks = days // 7  
    # use % to get the number of days that remain  
    remainder = days % 7  
    return "{} week(s) and {} day(s)".format(weeks, remainder)  
  
# test your function  
print(readable_timedelta(10))
```

Output:

```
1 week(s) and 3 day(s).
```

Nice work on writing your first functions! You'll see and write more functions soon.

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