Question One. 20 points. Write a short program that calculates and prints the harmonic mean of 25, 50 and 75. Hint: Use the online documentation at docs.python.org to read about the **statistics** module.

Question Two. 40 points. Supply the missing function for the program below. The missing function adds all of the consecutive integers between the two integers that it is passed. You can assume that the user will enter valid integers and that the second integer will be at least as large as the first one.

```
def main():
    low = int(input("Enter low integer: "))
    high = int(input("Enter high integer: "))
    summation = add_consecutive_numbers(low, high)
    print("The summation =", summation)

# ------------------------------------------------------------

main()
```

For example, in the transcript below, the user enters 5 and then 10. 45 is the value of the summation because 5 + 6 + 7 + 8 + 9 + 10 adds up to 45.

```
=============== RESTART: C:\Main Directory'
Enter low integer: 5
Enter high integer: 10
The summation = 45
```

Question Three. 40 points. Mercury dimes were minted from 1916 through 1945 and have a value of 10 cents. Supply the missing Boolean function for the program below to determine whether a coin is a Mercury dime.

```
def main():
    value = int(input("Enter value of coin: "))
    year = int(input("Enter year of coin: "))
    if mercury_dime(value, year):
        print("Mercury dime!")
    else:
        print("Unknown coin.")

# ------------------------------------------------------------

main()
```

For example, the transcript below shows three runs of the program.

```
=============== RESTART: C:\Main Direc
Enter value of coin: 10
Enter year of coin: 1915
Unknown coin.

=============== RESTART: C:\Main Direc
Enter value of coin: 10
Enter year of coin: 1916
Mercury dime!

=============== RESTART: C:\Main Direc
Enter value of coin: 5
Enter year of coin: 1916
Unknown coin.
```