# Answers to Programming Exercise 1 (2018)

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| **1.** | **Evidence 1** | def main():  n = input("Enter the value of n here: ")  # note: validation is not needed  n = int(n)  # you need to check when n == 0  if n == 0:  print("Error: value doesn't exist.")  else:  total = 0  # range(n) ranges from 0 to n - 1  for i in range(n):  total += (1 / (i + 1))  print(total)    print() |
|  | **Evidence 2** | >>> main()  Enter the value of n here: 0  Error: value doesn't exist.  >>> main()  Enter the value of n here: 1  1.0  >>> main()  Enter the value of n here: 2  1.5  >>> main()  Enter the value of n here: 10  2.9289682539682538  >>> main()  Enter the value of n here: 100  5.187377517639621 |

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| **2.** | **Evidence 3** | def main():  x = input("Enter an integer from 10 to 20 (exclusive): ")  x = int(x)  if x <= 10 or x >= 20:  print("The number, " + str(x) + ", is out of range.")  else:  print(x + 1, x, x - 1)  print() |
|  | **Evidence 4** | >>> main()  Enter an integer from 10 to 20 (exclusive): -5  The number, -5, is out of range.  >>> main()  Enter an integer from 10 to 20 (exclusive): 10  The number, 10, is out of range.  >>> main()  Enter an integer from 10 to 20 (exclusive): 17  18 17 16  >>> main()  Enter an integer from 10 to 20 (exclusive): 20  The number, 20, is out of range. |

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| **3.** | **Evidence 5** | def main():  x = input("Enter an integer from 10 to 20 (exclusive): ")  x = int(x)  if x <= 10 or x >= 20:  print("The number, " + str(x) + ", is out of range.")  else:  print(x + 1, x, x - 1)  print() |
|  | **Evidence 6** | >>> main()  Enter an integer from 10 to 20 (exclusive): -5  The number, -5, is out of range.  >>> main()  Enter an integer from 10 to 20 (exclusive): 10  The number, 10, is out of range.  >>> main()  Enter an integer from 10 to 20 (exclusive): 17  18 17 16  >>> main()  Enter an integer from 10 to 20 (exclusive): 20  The number, 20, is out of range. |