PF Assignment 02 Student Test cases

Question no. 1:

Case 1:

INPUT ->: 5000

OUTPUT ->: 70

Case 2:

INPUT ->: 1000

OUTPUT ->: 31

Question no. 2:

Case 1:

INPUT ->: Loan Amount: 912, Interest rate per year: 0.75, Monthly payment: 32

OUTPUT ->: 29 months

Case 2:

INPUT ->: Loan Amount: 1500, Interest rate per year: 3.7, Monthly payment: 42

OUTPUT ->: 38 months

Question no. 3:

Case 1:

INPUT ->: 100

OUTPUT ->:

Starting with the number 100:

100 is even, so I take half: 50

50 is even, so I take half: 25

25 is odd, so I make 3n+ 1: 76

76 is even, so I take half: 38

38 is even, so I take half: 19

19 is odd, so I make3n+ 1: 58

58 is even, so I take half: 29

29 is odd, so I make3n+ 1: 88

88 is even, so I take half: 44

44 is even, so I take half: 22

22 is even, so I take half: 11

11 is odd, so I make3n+ 1: 17

17 is odd, so I make3n+ 1: 52

52 is even, so I take half: 26

26 is even, so I take half: 13

13 is odd, so I make3n+ 1: 40

40 is even, so I take half: 20

20 is even, so I take half: 10

10 is even, so I take half: 5

5 is odd, so I make3n+ 1: 16

16 is even, so I take half: 8

8 is even, so I take half: 4

4 is even, so I take half: 2

2 is even, so I take half: 1

k = 25

Case 2:

INPUT ->: 17

OUTPUT ->:

Starting with the number 17:

17 is odd, so I make 3n+ 1: 52

52 is even, so I take half: 26

26 is even, so I take half: 13

13 is odd, so I make 3n+ 1: 40

40 is even, so I take half: 20

20 is even, so I take half: 10

10 is even, so I take half: 5

5 is odd, so I make 3n+ 1 : 16

16 is even, so I take half: 8

8 is even, so I take half: 4

4 is even, so I take half: 2

2 is even, so I take half: 1

k = 12

Question no. 4:

Case 1:

INPUT ->:

Population of town A = 6000,

Growth rate of town A =10%,

Population of town B = 12000,

Growth rate of town B = 8%.

OUTPUT ->:

Years = 38

Population of Town A = 224288

Population of Town B = 223396

Case 2:

INPUT ->:

Population of town A = 1500,

Growth rate of town A =26%,

Population of town B = 4700,

Growth rate of town B = 9%.

OUTPUT ->:

Years = 8

Population of Town A = 9525

Population of Town B = 9360

Question no. 5:

Case 1:

INPUT ->: 7864230

OUTPUT ->: Divisible

Case 2:

INPUT ->: 2373679

OUTPUT ->: Divisible

Question no. 6:

Case 1:

INPUT ->: First Num: 1, Second Num: 20

OUTPUT ->:

Odd numbers between firstNum and secondNum: 3 5 7 9 11 13 15 17 19

Sum of All Even numbers between firstNum and secondNum: 90

Number	Squares
1	1
2	4
3	9
4	16
5	25
6	36
7	49
8	64
9	81
10	100

Sum of square of odd numbers between firstNum and secondNum: 1329

There is no uppercase letters between firstNum and secondNum.

Case 2:

INPUT ->: First Num: 1, Second Num: 3

OUTPUT ->:

No Odd numbers between first Num and second Num.

Sum of All Even numbers between first Num and second Num: 2

Number	Squares
1	1
2	4
3	9
4	16
5	25
6	36
7	49
8	64
9	81
10	100

Sum of square of odd numbers between firstNum and secondNum: 0

There is no uppercase letters between firstNum and secondNum.

Question no. 8:

Case 1:

INPUT ->:

Enter the amount of apartment units: 50

Enter the rent amount when all units are occupied: 600

Enter the increase in rent that results in a vacant unit: 40

Enter the amount to maintain a rented unit: 27

OUTPUT ->:

Number of units to rent: 32

Amount to charge for rent: 1320

Case 2:

INPUT ->:

Enter the amount of apartment units: 70

Enter the rent amount when all units are occupied: 900

Enter the increase in rent that results in a vacant unit: 70

Enter the amount to maintain a rented unit: 50

OUTPUT ->:

Number of units to rent: 41

Amount to charge for rent: 2930

Question no. 10:

Case 1:

INPUT ->: Enter the number of Months: 7

OUTPUT ->:

At Start:

New pair: 0 Old Pair: 1

Total Pair: 1

After 2 months:

New pair: 1 Old Pair: 1

Total Pair: 2

After 4 months:

New pair: 1 Old Pair: 2

Total Pair: 3

After 6 months:

New pair: 2 Old Pair: 3

Total Pair: 5

Case 2:

INPUT ->: Enter the number of Months: 13

OUTPUT ->:

At Start:

New pair: 0 Old Pair: 1

Total Pair: 1

After 2 months:

New pair: 1 Old Pair: 1

Total Pair: 2

After 4 months:

New pair: 1 Old Pair: 2

Total Pair: 3

After 6 months:

New pair: 2 Old Pair: 3

Total Pair: 5

After 8 months:

New pair: 3 Old Pair: 5

Total Pair: 8

After 10 months:

New pair: 5 Old Pair: 8

Total Pair: 13

After 12 months:

New pair: 8 Old Pair: 13

Total Pair: 21