

**I confirm that this submission is my own work and is consistent with the Queen's regulations on Academic Integrity**

Function 1:	40
Input Value (Recursive): 7	13
1	26
2	52
4	17
	34
8	11
16	22
5	7
10	14
20	28
40	9
13	18
26	Input Value (Non-Recursive): 18
52	1
17	2
34	4
11	8
22	16
7	5
Input Value (Non-Recursive): 7	10
1	20
2	40
4	13
8	26
16	52
5	17
10	34
20	11
40	22
13	7
26	14
52	28
17	9
34	18
11	Input Value (Recursive): 19
22	1
7	2
Input Value (Recursive): 18	4
1	8
2	16
4	5
8	10
16	20
5	40
10	13
20	26

52  
17  
34  
11  
22  
44  
88  
29  
58  
19  
Input Value (Non-Recursive): 19  
1  
2  
4  
8  
16  
5  
10  
20  
40  
13  
26  
52  
17  
34  
11  
22  
44  
88  
29  
58  
19  
Input Value (Recursive): 22  
1  
2  
4  
8  
16  
5  
10  
20  
40  
13  
26  
52  
17  
34  
11  
22  
Input Value (Non-Recursive): 22

1  
2  
4  
8  
16  
5  
10  
20  
40  
13  
26  
52  
17  
34  
11  
22  
Input Value (Recursive): 105  
1  
2  
4  
8  
16  
5  
10  
20  
40  
13  
26  
52  
17  
34  
11  
22  
44  
88  
29  
58  
19  
38  
76  
152  
304  
101  
202  
404  
808  
269  
538  
179  
358

119  
238  
79  
158  
316  
105  
Input Value (Non-Recursive): 105  
1  
2  
4  
8  
16  
5  
10  
20  
40  
13  
26  
52  
17  
34  
11  
22  
44  
88  
29  
58  
19  
38  
76  
152  
304  
101  
202  
404  
808  
269  
538  
179  
358  
119  
238  
79  
158  
316  
105  
Function 2:  
Input Value (Recursive): 7  
2  
4

7  
Input Value (Non-Recursive): 7  
2  
4  
7  
Input Value (Recursive): 18  
2  
4  
6  
4  
2  
5  
8  
12  
18  
Input Value (Non-Recursive): 18  
2  
4  
6  
4  
2  
5  
8  
12  
18  
Input Value (Recursive): 19  
2  
4  
6  
4  
2  
5  
8  
12  
19  
Input Value (Non-Recursive): 19  
2  
4  
6  
4  
2  
5  
8  
12  
19  
Input Value (Recursive): 22  
2  
4  
7  
4

3  
2  
4  
6  
9  
14  
22  
Input Value (Non-Recursive): 22  
2  
4  
7  
4  
3  
2  
4  
6  
9  
14  
22  
Input Value (Recursive): 43  
4  
3  
2  
4  
6  
9  
14  
3  
2  
4  
6  
9  
2  
4  
6  
4  
2  
5  
8  
12  
18  
28  
43  
Input Value (Non-Recursive): 43  
4  
3  
2  
4  
6  
9

14  
3  
2  
4  
6  
9  
2  
4  
6  
4  
2  
5  
8  
12  
18  
28  
43  
Function 3:  
Input Value (Recursive): (0, 7)  
0  
1  
2  
3  
4  
5  
6  
7  
Input Value (Non-Recursive): (0, 7)  
0  
1  
2  
3  
4  
5  
6  
7  
Input Value (Recursive): (1, 18)  
1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13

14  
15  
16  
17  
18

Input Value (Non-Recursive): (1, 18)

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18

Input Value (Recursive): (4, 19)

4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19

Input Value (Non-Recursive): (4, 19)

4  
5  
6  
7  
8  
9  
10  
11

12  
13  
14  
15  
16  
17  
18  
19

Input Value (Recursive): (-1, 22)

-1  
0  
1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22

Input Value (Non-Recursive): (-1, 22)

-1  
0  
1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14

15

16

17

18

19

20

21

22

Function 4:

Input Value (Recursive): (0, 7)

0

2

1

4

7

6

5

3

Input Value (Non-Recursive): (0, 7)

0

2

1

4

7

6

5

3

Input Value (Recursive): (1, 18)

1

3

2

5

8

7

6

4

10

13

12

11

15

18

17

16

14

9

Input Value (Non-Recursive): (1, 18)

1

3

2

5

8

7

6

4

10

13

12

11

15

18

17

16

14

9

Input Value (Recursive): (4, 19)

4

6

5

8

10

9

7

12

14

13

16

19

18

17

15

11

Input Value (Non-Recursive): (4, 19)

4

6

5

8

10

9

7

12

14

13

16

19

18

17

15

11

Input Value (Recursive): (-1, 22)

0  
-1  
3  
2  
1  
6  
5  
9  
8  
7  
4  
12  
11  
15  
14  
13  
18  
17  
20  
22  
21  
19  
16  
10

Input Value (Non-Recursive): (-1, 22)

0  
-1  
3  
2  
1  
6  
5  
9  
8  
7  
4  
12  
11  
15  
14  
13  
18  
17  
20  
22  
21  
19  
16  
10