



Determine what rule the function machine is using.

1)

In	Out
22	36
33	47
41	55
47	61
50	64

2)

Input	Output
15	10
20	15
38	33
40	35
41	36

3)

Input	Output
33	28
45	40
45	40
46	41
55	50

4)

Input	Output
13	21
17	25
20	28
38	46
41	49

5)

Input	Output
10	19
19	28
30	39
33	42
43	52

6)

Input	Output
28	20
30	22
40	32
41	33
43	35

7)

In	Out
15	30
31	46
39	54
45	60
50	65

8)

Input	Output
37	29
38	30
44	36
48	40
56	48

9)

In	Out
22	18
28	24
29	25
33	29
38	34

10)

In	Out
32	19
34	21
41	28
43	30
46	33

11)

In	Out
11	17
22	28
34	40
37	43
42	48

12)

In	Out
10	19
12	21
12	21
26	35
50	59

Answers

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____



Determine what rule the function machine is using.

1)

In	Out
22	36
33	47
41	55
47	61
50	64

2)

Input	Output
15	10
20	15
38	33
40	35
41	36

3)

Input	Output
33	28
45	40
45	40
46	41
55	50

4)

Input	Output
13	21
17	25
20	28
38	46
41	49

5)

Input	Output
10	19
19	28
30	39
33	42
43	52

6)

Input	Output
28	20
30	22
40	32
41	33
43	35

7)

In	Out
15	30
31	46
39	54
45	60
50	65

8)

Input	Output
37	29
38	30
44	36
48	40
56	48

9)

In	Out
22	18
28	24
29	25
33	29
38	34

10)

In	Out
32	19
34	21
41	28
43	30
46	33

11)

In	Out
11	17
22	28
34	40
37	43
42	48

12)

In	Out
10	19
12	21
12	21
26	35
50	59

Answers

1. **Add 14**

2. **Sub 5**

3. **Sub 5**

4. **Add 8**

5. **Add 9**

6. **Sub 8**

7. **Add 15**

8. **Sub 8**

9. **Sub 4**

10. **Sub 13**

11. **Add 6**

12. **Add 9**



Determine what rule the function machine is using.

Answers

1)

In	Out
26	15
34	23
39	28
56	45
58	47

2)

Input	Output
27	35
29	37
38	46
46	54
49	57

3)

In	Out
23	13
33	23
44	34
55	45
59	49

4)

In	Out
22	10
30	18
48	36
56	44
58	46

5)

In	Out
17	30
34	47
42	55
44	57
48	61

6)

In	Out
35	21
39	25
47	33
55	41
60	46

7)

Input	Output
14	25
22	33
23	34
25	36
48	59

8)

Input	Output
31	20
39	28
50	39
55	44
58	47

9)

Input	Output
23	28
24	29
25	30
38	43
43	48

10)

In	Out
15	21
27	33
39	45
40	46
48	54

11)

In	Out
26	14
37	25
39	27
53	41
57	45

12)

Input	Output
24	17
36	29
40	33
45	38
55	48

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____



Determine what rule the function machine is using.

1)

In	Out
26	15
34	23
39	28
56	45
58	47

2)

Input	Output
27	35
29	37
38	46
46	54
49	57

3)

In	Out
23	13
33	23
44	34
55	45
59	49

4)

In	Out
22	10
30	18
48	36
56	44
58	46

5)

In	Out
17	30
34	47
42	55
44	57
48	61

6)

In	Out
35	21
39	25
47	33
55	41
60	46

7)

Input	Output
14	25
22	33
23	34
25	36
48	59

8)

Input	Output
31	20
39	28
50	39
55	44
58	47

9)

Input	Output
23	28
24	29
25	30
38	43
43	48

10)

In	Out
15	21
27	33
39	45
40	46
48	54

11)

In	Out
26	14
37	25
39	27
53	41
57	45

12)

Input	Output
24	17
36	29
40	33
45	38
55	48

Answers

1. **Sub 11**

2. **Add 8**

3. **Sub 10**

4. **Sub 12**

5. **Add 13**

6. **Sub 14**

7. **Add 11**

8. **Sub 11**

9. **Add 5**

10. **Add 6**

11. **Sub 12**

12. **Sub 7**



Determine what rule the function machine is using.

1)

Input	Output
34	28
34	28
42	36
48	42
49	43

2)

In	Out
19	13
21	15
33	27
43	37
48	42

3)

Input	Output
26	12
35	21
49	35
56	42
59	45

4)

Input	Output
31	18
46	33
47	34
47	34
57	44

5)

Input	Output
33	18
44	29
55	40
61	46
62	47

6)

In	Out
11	21
22	32
27	37
33	43
41	51

7)

In	Out
23	14
24	15
25	16
39	30
51	42

8)

In	Out
26	22
30	26
38	34
46	42
54	50

9)

In	Out
16	21
21	26
25	30
45	50
45	50

10)

In	Out
23	11
25	13
27	15
35	23
46	34

11)

Input	Output
39	28
45	34
46	35
54	43
56	45

12)

Input	Output
14	10
39	35
41	37
45	41
53	49

Answers

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____



Determine what rule the function machine is using.

1)

Input	Output
34	28
34	28
42	36
48	42
49	43

2)

In	Out
19	13
21	15
33	27
43	37
48	42

3)

Input	Output
26	12
35	21
49	35
56	42
59	45

4)

Input	Output
31	18
46	33
47	34
47	34
57	44

5)

Input	Output
33	18
44	29
55	40
61	46
62	47

6)

In	Out
11	21
22	32
27	37
33	43
41	51

7)

In	Out
23	14
24	15
25	16
39	30
51	42

8)

In	Out
26	22
30	26
38	34
46	42
54	50

9)

In	Out
16	21
21	26
25	30
45	50
45	50

10)

In	Out
23	11
25	13
27	15
35	23
46	34

11)

Input	Output
39	28
45	34
46	35
54	43
56	45

12)

Input	Output
14	10
39	35
41	37
45	41
53	49

Answers

1. Sub 6

2. Sub 6

3. Sub 14

4. Sub 13

5. Sub 15

6. Add 10

7. Sub 9

8. Sub 4

9. Add 5

10. Sub 12

11. Sub 11

12. Sub 4



Determine what rule the function machine is using.

Answers

1)

Input	Output
22	17
37	32
41	36
42	37
53	48

2)

In	Out
17	10
46	39
49	42
50	43
53	46

3)

In	Out
11	26
12	27
32	47
40	55
43	58

4)

Input	Output
25	31
30	36
44	50
46	52
47	53

5)

In	Out
12	22
19	29
21	31
27	37
50	60

6)

In	Out
14	19
16	21
24	29
34	39
43	48

7)

Input	Output
11	26
17	32
23	38
45	60
46	61

8)

In	Out
17	25
29	37
32	40
35	43
50	58

9)

In	Out
10	19
16	25
42	51
43	52
50	59

10)

In	Out
15	24
22	31
23	32
42	51
48	57

11)

Input	Output
17	27
19	29
22	32
23	33
39	49

12)

In	Out
38	33
41	36
49	44
50	45
52	47

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____



Determine what rule the function machine is using.

1)

Input	Output
22	17
37	32
41	36
42	37
53	48

2)

In	Out
17	10
46	39
49	42
50	43
53	46

3)

In	Out
11	26
12	27
32	47
40	55
43	58

4)

Input	Output
25	31
30	36
44	50
46	52
47	53

5)

In	Out
12	22
19	29
21	31
27	37
50	60

6)

In	Out
14	19
16	21
24	29
34	39
43	48

7)

Input	Output
11	26
17	32
23	38
45	60
46	61

8)

In	Out
17	25
29	37
32	40
35	43
50	58

9)

In	Out
10	19
16	25
42	51
43	52
50	59

10)

In	Out
15	24
22	31
23	32
42	51
48	57

11)

Input	Output
17	27
19	29
22	32
23	33
39	49

12)

In	Out
38	33
41	36
49	44
50	45
52	47

Answers

1. **Sub 5**

2. **Sub 7**

3. **Add 15**

4. **Add 6**

5. **Add 10**

6. **Add 5**

7. **Add 15**

8. **Add 8**

9. **Add 9**

10. **Add 9**

11. **Add 10**

12. **Sub 5**



Determine what rule the function machine is using.

1)

In	Out
15	21
17	23
24	30
32	38
39	45

2)

Input	Output
28	16
32	20
41	29
56	44
57	45

3)

Input	Output
27	16
29	18
45	34
54	43
58	47

4)

Input	Output
23	10
42	29
53	40
55	42
57	44

5)

In	Out
17	26
18	27
18	27
24	33
29	38

6)

In	Out
20	27
26	33
42	49
46	53
50	57

7)

In	Out
34	24
36	26
37	27
46	36
48	38

8)

Input	Output
19	13
22	16
23	17
35	29
35	29

9)

Input	Output
25	10
27	12
42	27
43	28
54	39

10)

Input	Output
26	41
29	44
29	44
34	49
42	57

11)

Input	Output
27	13
33	19
34	20
40	26
64	50

12)

In	Out
28	14
34	20
53	39
58	44
62	48

Answers

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____



Determine what rule the function machine is using.

1)

In	Out
15	21
17	23
24	30
32	38
39	45

2)

Input	Output
28	16
32	20
41	29
56	44
57	45

3)

Input	Output
27	16
29	18
45	34
54	43
58	47

4)

Input	Output
23	10
42	29
53	40
55	42
57	44

5)

In	Out
17	26
18	27
18	27
24	33
29	38

6)

In	Out
20	27
26	33
42	49
46	53
50	57

7)

In	Out
34	24
36	26
37	27
46	36
48	38

8)

Input	Output
19	13
22	16
23	17
35	29
35	29

9)

Input	Output
25	10
27	12
42	27
43	28
54	39

10)

Input	Output
26	41
29	44
29	44
34	49
42	57

11)

Input	Output
27	13
33	19
34	20
40	26
64	50

12)

In	Out
28	14
34	20
53	39
58	44
62	48

Answers

1. Add 6

2. Sub 12

3. Sub 11

4. Sub 13

5. Add 9

6. Add 7

7. Sub 10

8. Sub 6

9. Sub 15

10. Add 15

11. Sub 14

12. Sub 14



Determine what rule the function machine is using.

1)

In	Out
19	32
24	37
41	54
44	57
46	59

2)

In	Out
12	18
14	20
18	24
42	48
48	54

3)

In	Out
15	28
17	30
24	37
25	38
42	55

4)

In	Out
20	11
23	14
40	31
41	32
43	34

5)

Input	Output
17	23
19	25
24	30
27	33
33	39

6)

Input	Output
14	18
17	21
28	32
29	33
45	49

7)

Input	Output
37	48
47	58
48	59
48	59
49	60

8)

In	Out
15	24
28	37
34	43
36	45
42	51

9)

In	Out
15	10
37	32
42	37
51	46
53	48

10)

In	Out
16	27
23	34
29	40
39	50
41	52

11)

In	Out
11	24
38	51
45	58
45	58
47	60

12)

In	Out
11	18
18	25
21	28
35	42
49	56

Answers

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____



Determine what rule the function machine is using.

1)

In	Out
19	32
24	37
41	54
44	57
46	59

2)

In	Out
12	18
14	20
18	24
42	48
48	54

3)

In	Out
15	28
17	30
24	37
25	38
42	55

4)

In	Out
20	11
23	14
40	31
41	32
43	34

5)

Input	Output
17	23
19	25
24	30
27	33
33	39

6)

Input	Output
14	18
17	21
28	32
29	33
45	49

7)

Input	Output
37	48
47	58
48	59
48	59
49	60

8)

In	Out
15	24
28	37
34	43
36	45
42	51

9)

In	Out
15	10
37	32
42	37
51	46
53	48

10)

In	Out
16	27
23	34
29	40
39	50
41	52

11)

In	Out
11	24
38	51
45	58
45	58
47	60

12)

In	Out
11	18
18	25
21	28
35	42
49	56

Answers

1. **Add 13**

2. **Add 6**

3. **Add 13**

4. **Sub 9**

5. **Add 6**

6. **Add 4**

7. **Add 11**

8. **Add 9**

9. **Sub 5**

10. **Add 11**

11. **Add 13**

12. **Add 7**



Determine what rule the function machine is using.

1)

Input	Output
11	24
20	33
28	41
29	42
38	51

2)

In	Out
11	16
18	23
27	32
32	37
33	38

3)

Input	Output
24	11
36	23
37	24
40	27
49	36

4)

In	Out
17	30
18	31
25	38
25	38
31	44

5)

In	Out
12	23
13	24
17	28
29	40
48	59

6)

Input	Output
22	13
30	21
40	31
41	32
51	42

7)

Input	Output
32	23
36	27
43	34
55	46
58	49

8)

Input	Output
19	28
28	37
30	39
37	46
49	58

9)

In	Out
24	13
29	18
38	27
44	33
57	46

10)

In	Out
13	19
18	24
26	32
30	36
37	43

11)

Input	Output
28	15
45	32
48	35
54	41
58	45

12)

In	Out
17	24
21	28
30	37
40	47
45	52

Answers

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____



Determine what rule the function machine is using.

1)

Input	Output
11	24
20	33
28	41
29	42
38	51

2)

In	Out
11	16
18	23
27	32
32	37
33	38

3)

Input	Output
24	11
36	23
37	24
40	27
49	36

4)

In	Out
17	30
18	31
25	38
25	38
31	44

5)

In	Out
12	23
13	24
17	28
29	40
48	59

6)

Input	Output
22	13
30	21
40	31
41	32
51	42

7)

Input	Output
32	23
36	27
43	34
55	46
58	49

8)

Input	Output
19	28
28	37
30	39
37	46
49	58

9)

In	Out
24	13
29	18
38	27
44	33
57	46

10)

In	Out
13	19
18	24
26	32
30	36
37	43

11)

Input	Output
28	15
45	32
48	35
54	41
58	45

12)

In	Out
17	24
21	28
30	37
40	47
45	52

Answers

1. **Add 13**

2. **Add 5**

3. **Sub 13**

4. **Add 13**

5. **Add 11**

6. **Sub 9**

7. **Sub 9**

8. **Add 9**

9. **Sub 11**

10. **Add 6**

11. **Sub 13**

12. **Add 7**



Determine what rule the function machine is using.

1)

In	Out
11	15
11	15
28	32
33	37
50	54

2)

Input	Output
27	17
32	22
49	39
50	40
53	43

3)

In	Out
25	19
31	25
35	29
44	38
53	47

4)

In	Out
31	23
32	24
51	43
54	46
56	48

5)

Input	Output
19	10
39	30
42	33
50	41
54	45

6)

Input	Output
19	15
28	24
32	28
36	32
38	34

7)

In	Out
39	27
42	30
45	33
53	41
62	50

8)

Input	Output
17	27
22	32
34	44
39	49
43	53

9)

Input	Output
15	29
22	36
30	44
32	46
38	52

10)

Input	Output
13	19
14	20
23	29
26	32
41	47

11)

In	Out
16	21
17	22
18	23
31	36
31	36

12)

Input	Output
29	34
35	40
42	47
43	48
50	55

Answers

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____



Determine what rule the function machine is using.

1)

In	Out
11	15
11	15
28	32
33	37
50	54

2)

Input	Output
27	17
32	22
49	39
50	40
53	43

3)

In	Out
25	19
31	25
35	29
44	38
53	47

4)

In	Out
31	23
32	24
51	43
54	46
56	48

5)

Input	Output
19	10
39	30
42	33
50	41
54	45

6)

Input	Output
19	15
28	24
32	28
36	32
38	34

7)

In	Out
39	27
42	30
45	33
53	41
62	50

8)

Input	Output
17	27
22	32
34	44
39	49
43	53

9)

Input	Output
15	29
22	36
30	44
32	46
38	52

10)

Input	Output
13	19
14	20
23	29
26	32
41	47

11)

In	Out
16	21
17	22
18	23
31	36
31	36

12)

Input	Output
29	34
35	40
42	47
43	48
50	55

Answers

1. Add 4

2. Sub 10

3. Sub 6

4. Sub 8

5. Sub 9

6. Sub 4

7. Sub 12

8. Add 10

9. Add 14

10. Add 6

11. Add 5

12. Add 5



Determine what rule the function machine is using.

Answers

1)

Input	Output
22	27
25	30
37	42
47	52
47	52

2)

Input	Output
16	20
20	24
31	35
34	38
37	41

3)

Input	Output
19	15
26	22
37	33
40	36
41	37

4)

In	Out
16	21
23	28
42	47
42	47
46	51

5)

In	Out
19	31
39	51
40	52
43	55
49	61

6)

In	Out
11	19
11	19
11	19
13	21
26	34

7)

In	Out
20	26
23	29
34	40
42	48
46	52

8)

In	Out
24	32
24	32
25	33
29	37
37	45

9)

Input	Output
16	25
23	32
25	34
30	39
35	44

10)

Input	Output
14	27
19	32
25	38
29	42
33	46

11)

In	Out
23	13
23	13
48	38
49	39
56	46

12)

Input	Output
14	10
18	14
27	23
30	26
38	34

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____



Determine what rule the function machine is using.

1)

Input	Output
22	27
25	30
37	42
47	52
47	52

2)

Input	Output
16	20
20	24
31	35
34	38
37	41

3)

Input	Output
19	15
26	22
37	33
40	36
41	37

4)

In	Out
16	21
23	28
42	47
42	47
46	51

5)

In	Out
19	31
39	51
40	52
43	55
49	61

6)

In	Out
11	19
11	19
11	19
13	21
26	34

7)

In	Out
20	26
23	29
34	40
42	48
46	52

8)

In	Out
24	32
24	32
25	33
29	37
37	45

9)

Input	Output
16	25
23	32
25	34
30	39
35	44

10)

Input	Output
14	27
19	32
25	38
29	42
33	46

11)

In	Out
23	13
23	13
48	38
49	39
56	46

12)

Input	Output
14	10
18	14
27	23
30	26
38	34

Answers

1. Add 5

2. Add 4

3. Sub 4

4. Add 5

5. Add 12

6. Add 8

7. Add 6

8. Add 8

9. Add 9

10. Add 13

11. Sub 10

12. Sub 4



Determine what rule the function machine is using.

1)

In	Out
20	28
28	36
40	48
45	53
50	58

2)

In	Out
16	21
18	23
22	27
30	35
45	50

3)

Input	Output
19	10
50	41
52	43
57	48
59	50

4)

Input	Output
21	11
31	21
33	23
35	25
54	44

5)

Input	Output
10	23
20	33
38	51
45	58
49	62

6)

In	Out
10	19
32	41
36	45
43	52
45	54

7)

In	Out
26	31
36	41
37	42
44	49
50	55

8)

In	Out
13	18
14	19
24	29
27	32
28	33

9)

In	Out
10	17
27	34
30	37
45	52
48	55

10)

In	Out
19	12
25	18
33	26
40	33
53	46

11)

Input	Output
22	13
25	16
53	44
56	47
59	50

12)

Input	Output
15	25
28	38
29	39
35	45
50	60

Answers

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____



Determine what rule the function machine is using.

1)

In	Out
20	28
28	36
40	48
45	53
50	58

2)

In	Out
16	21
18	23
22	27
30	35
45	50

3)

Input	Output
19	10
50	41
52	43
57	48
59	50

4)

Input	Output
21	11
31	21
33	23
35	25
54	44

5)

Input	Output
10	23
20	33
38	51
45	58
49	62

6)

In	Out
10	19
32	41
36	45
43	52
45	54

7)

In	Out
26	31
36	41
37	42
44	49
50	55

8)

In	Out
13	18
14	19
24	29
27	32
28	33

9)

In	Out
10	17
27	34
30	37
45	52
48	55

10)

In	Out
19	12
25	18
33	26
40	33
53	46

11)

Input	Output
22	13
25	16
53	44
56	47
59	50

12)

Input	Output
15	25
28	38
29	39
35	45
50	60

Answers

1. **Add 8**

2. **Add 5**

3. **Sub 9**

4. **Sub 10**

5. **Add 13**

6. **Add 9**

7. **Add 5**

8. **Add 5**

9. **Add 7**

10. **Sub 7**

11. **Sub 9**

12. **Add 10**