



Determine which number sentence best matches the function machine.

Answers

1)

In	Out
10	40
2	8
4	16
7	28
8	32

If each input is 'Q' which rule could the function machine be using?

- A. $Q \times 4$ B. $Q + 2$
 C. $Q \div 4$ D. $Q + 6$

2)

In	Out
30	3
100	10
50	5
90	9
80	8

If each input is 'Q' which rule could the function machine be using?

- A. $Q \times 10$ B. $Q \div 6$
 C. $Q \div 10$ D. $Q \div 2$

3)

In	Out
98	92
40	34
15	9
32	26
73	67

If each input is 'Q' which rule could the function machine be using?

- A. $Q - 6$ B. $Q \div 9$
 C. $Q \div 6$ D. $Q \times 6$

4)

In	Out
14	27
72	85
35	48
78	91
21	34

If each input is 'Q' which rule could the function machine be using?

- A. $Q \times 7$ B. $Q + 7$
 C. $Q + 13$ D. $Q \times 13$

5)

In	Out
2	16
8	64
10	80
5	40
3	24

If each input is 'Q' which rule could the function machine be using?

- A. $Q \times 4$ B. $Q \times 8$
 C. $Q + 7$ D. $Q \times 3$

6)

In	Out
50	37
28	15
69	56
109	96
61	48

If each input is 'Q' which rule could the function machine be using?

- A. $Q - 13$ B. $Q \div 3$
 C. $Q \div 5$ D. $Q - 5$

7)

In	Out
9	27
7	21
10	30
5	15
3	9

If each input is 'Q' which rule could the function machine be using?

- A. $Q + 7$ B. $Q + 6$
 C. $Q \div 3$ D. $Q \times 3$

8)

In	Out
62	58
92	88
102	98
66	62
38	34

If each input is 'Q' which rule could the function machine be using?

- A. $Q \times 4$ B. $Q \div 9$
 C. $Q - 2$ D. $Q - 4$

9)

In	Out
21	7
30	10
9	3
24	8
15	5

If each input is 'Q' which rule could the function machine be using?

- A. $Q - 3$ B. $Q - 6$
 C. $Q + 3$ D. $Q \div 3$

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____



Determine which number sentence best matches the function machine.

1)

In	Out
10	40
2	8
4	16
7	28
8	32

If each input is 'Q' which rule could the function machine be using?

- A. $Q \times 4$ B. $Q + 2$
 C. $Q \div 4$ D. $Q + 6$

2)

In	Out
30	3
100	10
50	5
90	9
80	8

If each input is 'Q' which rule could the function machine be using?

- A. $Q \times 10$ B. $Q \div 6$
 C. $Q \div 10$ D. $Q \div 2$

3)

In	Out
98	92
40	34
15	9
32	26
73	67

If each input is 'Q' which rule could the function machine be using?

- A. $Q - 6$ B. $Q \div 9$
 C. $Q \div 6$ D. $Q \times 6$

4)

In	Out
14	27
72	85
35	48
78	91
21	34

If each input is 'Q' which rule could the function machine be using?

- A. $Q \times 7$ B. $Q + 7$
 C. $Q + 13$ D. $Q \times 13$

5)

In	Out
2	16
8	64
10	80
5	40
3	24

If each input is 'Q' which rule could the function machine be using?

- A. $Q \times 4$ B. $Q \times 8$
 C. $Q + 7$ D. $Q \times 3$

6)

In	Out
50	37
28	15
69	56
109	96
61	48

If each input is 'Q' which rule could the function machine be using?

- A. $Q - 13$ B. $Q \div 3$
 C. $Q \div 5$ D. $Q - 5$

7)

In	Out
9	27
7	21
10	30
5	15
3	9

If each input is 'Q' which rule could the function machine be using?

- A. $Q + 7$ B. $Q + 6$
 C. $Q \div 3$ D. $Q \times 3$

8)

In	Out
62	58
92	88
102	98
66	62
38	34

If each input is 'Q' which rule could the function machine be using?

- A. $Q \times 4$ B. $Q \div 9$
 C. $Q - 2$ D. $Q - 4$

9)

In	Out
21	7
30	10
9	3
24	8
15	5

If each input is 'Q' which rule could the function machine be using?

- A. $Q - 3$ B. $Q - 6$
 C. $Q + 3$ D. $Q \div 3$

Answers

1. **A**
2. **C**
3. **A**
4. **C**
5. **B**
6. **A**
7. **D**
8. **D**
9. **D**



Determine which number sentence best matches the function machine.

Answers

1)

In	Out
90	92
5	7
59	61
8	10
1	3

If each input is 'Q' which rule could the function machine be using?

- A. $Q + 2$ B. $Q + 9$
 C. $Q - 2$ D. $Q \times 2$

2)

In	Out
22	36
88	102
89	103
32	46
37	51

If each input is 'Q' which rule could the function machine be using?

- A. $Q \times 4$ B. $Q + 3$
 C. $Q \times 6$ D. $Q + 14$

3)

In	Out
9	36
5	20
10	40
6	24
7	28

If each input is 'Q' which rule could the function machine be using?

- A. $Q \times 7$ B. $Q \times 6$
 C. $Q + 10$ D. $Q \times 4$

4)

In	Out
15	5
18	6
9	3
21	7
12	4

If each input is 'Q' which rule could the function machine be using?

- A. $Q - 7$ B. $Q + 3$
 C. $Q \div 8$ D. $Q \div 3$

5)

In	Out
42	38
5	1
49	45
91	87
40	36

If each input is 'Q' which rule could the function machine be using?

- A. $Q + 4$ B. $Q - 4$
 C. $Q \times 4$ D. $Q \div 8$

6)

In	Out
3	27
4	36
7	63
6	54
5	45

If each input is 'Q' which rule could the function machine be using?

- A. $Q + 2$ B. $Q \times 9$
 C. $Q \times 7$ D. $Q \times 8$

7)

In	Out
42	6
56	8
63	9
70	10
49	7

If each input is 'Q' which rule could the function machine be using?

- A. $Q \div 4$ B. $Q \div 7$
 C. $Q \div 9$ D. $Q \times 7$

8)

In	Out
2	18
8	72
3	27
6	54
5	45

If each input is 'Q' which rule could the function machine be using?

- A. $Q + 9$ B. $Q - 9$
 C. $Q \div 9$ D. $Q \times 9$

9)

In	Out
72	9
24	3
32	4
16	2
40	5

If each input is 'Q' which rule could the function machine be using?

- A. $Q + 8$ B. $Q \div 8$
 C. $Q \times 8$ D. $Q \div 2$

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____



Determine which number sentence best matches the function machine.

1)

In	Out
90	92
5	7
59	61
8	10
1	3

If each input is 'Q' which rule could the function machine be using?

- A. $Q + 2$ B. $Q + 9$
C. $Q - 2$ D. $Q \times 2$

2)

In	Out
22	36
88	102
89	103
32	46
37	51

If each input is 'Q' which rule could the function machine be using?

- A. $Q \times 4$ B. $Q + 3$
C. $Q \times 6$ D. $Q + 14$

3)

In	Out
9	36
5	20
10	40
6	24
7	28

If each input is 'Q' which rule could the function machine be using?

- A. $Q \times 7$ B. $Q \times 6$
C. $Q + 10$ D. $Q \times 4$

4)

In	Out
15	5
18	6
9	3
21	7
12	4

If each input is 'Q' which rule could the function machine be using?

- A. $Q - 7$ B. $Q + 3$
C. $Q \div 8$ D. $Q \div 3$

5)

In	Out
42	38
5	1
49	45
91	87
40	36

If each input is 'Q' which rule could the function machine be using?

- A. $Q + 4$ B. $Q - 4$
C. $Q \times 4$ D. $Q \div 8$

6)

In	Out
3	27
4	36
7	63
6	54
5	45

If each input is 'Q' which rule could the function machine be using?

- A. $Q + 2$ B. $Q \times 9$
C. $Q \times 7$ D. $Q \times 8$

7)

In	Out
42	6
56	8
63	9
70	10
49	7

If each input is 'Q' which rule could the function machine be using?

- A. $Q \div 4$ B. $Q \div 7$
C. $Q \div 9$ D. $Q \times 7$

8)

In	Out
2	18
8	72
3	27
6	54
5	45

If each input is 'Q' which rule could the function machine be using?

- A. $Q + 9$ B. $Q - 9$
C. $Q \div 9$ D. $Q \times 9$

9)

In	Out
72	9
24	3
32	4
16	2
40	5

If each input is 'Q' which rule could the function machine be using?

- A. $Q + 8$ B. $Q \div 8$
C. $Q \times 8$ D. $Q \div 2$

Answers

1. **A**
2. **D**
3. **D**
4. **D**
5. **B**
6. **B**
7. **B**
8. **D**
9. **B**



Determine which number sentence best matches the function machine.

Answers

1)

In	Out
81	73
71	63
75	67
63	55
13	5

If each input is 'Q' which rule could the function machine be using?

- A. $Q - 2$ B. $Q \div 3$
 C. $Q + 8$ D. $Q - 8$

2)

In	Out
99	92
47	40
59	52
8	1
49	42

If each input is 'Q' which rule could the function machine be using?

- A. $Q - 7$ B. $Q \div 3$
 C. $Q \div 4$ D. $Q + 7$

3)

In	Out
30	15
20	5
34	19
91	76
73	58

If each input is 'Q' which rule could the function machine be using?

- A. $Q \div 15$ B. $Q \div 7$
 C. $Q - 15$ D. $Q \div 5$

4)

In	Out
51	67
36	52
42	58
18	34
77	93

If each input is 'Q' which rule could the function machine be using?

- A. $Q + 16$ B. $Q + 3$
 C. $Q \times 16$ D. $Q \times 3$

5)

In	Out
54	70
72	88
1	17
38	54
40	56

If each input is 'Q' which rule could the function machine be using?

- A. $Q - 16$ B. $Q + 7$
 C. $Q \times 16$ D. $Q + 16$

6)

In	Out
73	92
18	37
76	95
5	24
68	87

If each input is 'Q' which rule could the function machine be using?

- A. $Q + 19$ B. $Q \div 19$
 C. $Q \times 6$ D. $Q + 9$

7)

In	Out
9	72
5	40
8	64
4	32
3	24

If each input is 'Q' which rule could the function machine be using?

- A. $Q \times 8$ B. $Q \times 6$
 C. $Q \times 10$ D. $Q + 8$

8)

In	Out
32	8
28	7
24	6
8	2
36	9

If each input is 'Q' which rule could the function machine be using?

- A. $Q \times 4$ B. $Q \div 4$
 C. $Q + 4$ D. $Q - 2$

9)

In	Out
3	15
7	35
8	40
10	50
2	10

If each input is 'Q' which rule could the function machine be using?

- A. $Q + 2$ B. $Q + 7$
 C. $Q \times 6$ D. $Q \times 5$

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____



Determine which number sentence best matches the function machine.

1)

In	Out
81	73
71	63
75	67
63	55
13	5

If each input is 'Q' which rule could the function machine be using?

- A. $Q - 2$ B. $Q \div 3$
 C. $Q + 8$ D. $Q - 8$

2)

In	Out
99	92
47	40
59	52
8	1
49	42

If each input is 'Q' which rule could the function machine be using?

- A. $Q - 7$ B. $Q \div 3$
 C. $Q \div 4$ D. $Q + 7$

3)

In	Out
30	15
20	5
34	19
91	76
73	58

If each input is 'Q' which rule could the function machine be using?

- A. $Q \div 15$ B. $Q \div 7$
 C. $Q - 15$ D. $Q \div 5$

4)

In	Out
51	67
36	52
42	58
18	34
77	93

If each input is 'Q' which rule could the function machine be using?

- A. $Q + 16$ B. $Q + 3$
 C. $Q \times 16$ D. $Q \times 3$

5)

In	Out
54	70
72	88
1	17
38	54
40	56

If each input is 'Q' which rule could the function machine be using?

- A. $Q - 16$ B. $Q + 7$
 C. $Q \times 16$ D. $Q + 16$

6)

In	Out
73	92
18	37
76	95
5	24
68	87

If each input is 'Q' which rule could the function machine be using?

- A. $Q + 19$ B. $Q \div 19$
 C. $Q \times 6$ D. $Q + 9$

7)

In	Out
9	72
5	40
8	64
4	32
3	24

If each input is 'Q' which rule could the function machine be using?

- A. $Q \times 8$ B. $Q \times 6$
 C. $Q \times 10$ D. $Q + 8$

8)

In	Out
32	8
28	7
24	6
8	2
36	9

If each input is 'Q' which rule could the function machine be using?

- A. $Q \times 4$ B. $Q \div 4$
 C. $Q + 4$ D. $Q - 2$

9)

In	Out
3	15
7	35
8	40
10	50
2	10

If each input is 'Q' which rule could the function machine be using?

- A. $Q + 2$ B. $Q + 7$
 C. $Q \times 6$ D. $Q \times 5$

Answers

1. **D**
2. **A**
3. **C**
4. **A**
5. **D**
6. **A**
7. **A**
8. **B**
9. **D**



Determine which number sentence best matches the function machine.

Answers

1)

In	Out
38	51
75	88
2	15
64	77
48	61

If each input is 'Q' which rule could the function machine be using?

- A. $Q \div 13$ B. $Q + 13$
 C. $Q \times 9$ D. $Q - 13$

2)

In	Out
58	40
112	94
97	79
41	23
99	81

If each input is 'Q' which rule could the function machine be using?

- A. $Q - 4$ B. $Q - 10$
 C. $Q \div 10$ D. $Q - 18$

3)

In	Out
42	6
28	4
35	5
21	3
63	9

If each input is 'Q' which rule could the function machine be using?

- A. $Q - 7$ B. $Q - 2$
 C. $Q \div 7$ D. $Q + 7$

4)

In	Out
10	70
2	14
3	21
7	49
8	56

If each input is 'Q' which rule could the function machine be using?

- A. $Q \times 9$ B. $Q + 7$
 C. $Q \times 7$ D. $Q + 6$

5)

In	Out
10	20
6	12
4	8
5	10
2	4

If each input is 'Q' which rule could the function machine be using?

- A. $Q + 2$ B. $Q + 10$
 C. $Q - 2$ D. $Q \times 2$

6)

In	Out
3	9
98	104
82	88
25	31
70	76

If each input is 'Q' which rule could the function machine be using?

- A. $Q + 2$ B. $Q \times 6$
 C. $Q \div 6$ D. $Q + 6$

7)

In	Out
67	66
84	83
28	27
33	32
70	69

If each input is 'Q' which rule could the function machine be using?

- A. $Q - 1$ B. $Q + 1$
 C. $Q \div 6$ D. $Q \div 1$

8)

In	Out
36	4
45	5
54	6
90	10
81	9

If each input is 'Q' which rule could the function machine be using?

- A. $Q - 4$ B. $Q \div 8$
 C. $Q - 9$ D. $Q \div 9$

9)

In	Out
64	77
87	100
78	91
27	40
45	58

If each input is 'Q' which rule could the function machine be using?

- A. $Q \times 13$ B. $Q + 13$
 C. $Q + 10$ D. $Q + 6$

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____



Determine which number sentence best matches the function machine.

1)

In	Out
38	51
75	88
2	15
64	77
48	61

If each input is 'Q' which rule could the function machine be using?

- A. $Q \div 13$ B. $Q + 13$
 C. $Q \times 9$ D. $Q - 13$

2)

In	Out
58	40
112	94
97	79
41	23
99	81

If each input is 'Q' which rule could the function machine be using?

- A. $Q - 4$ B. $Q - 10$
 C. $Q \div 10$ D. $Q - 18$

3)

In	Out
42	6
28	4
35	5
21	3
63	9

If each input is 'Q' which rule could the function machine be using?

- A. $Q - 7$ B. $Q - 2$
 C. $Q \div 7$ D. $Q + 7$

4)

In	Out
10	70
2	14
3	21
7	49
8	56

If each input is 'Q' which rule could the function machine be using?

- A. $Q \times 9$ B. $Q + 7$
 C. $Q \times 7$ D. $Q + 6$

5)

In	Out
10	20
6	12
4	8
5	10
2	4

If each input is 'Q' which rule could the function machine be using?

- A. $Q + 2$ B. $Q + 10$
 C. $Q - 2$ D. $Q \times 2$

6)

In	Out
3	9
98	104
82	88
25	31
70	76

If each input is 'Q' which rule could the function machine be using?

- A. $Q + 2$ B. $Q \times 6$
 C. $Q \div 6$ D. $Q + 6$

7)

In	Out
67	66
84	83
28	27
33	32
70	69

If each input is 'Q' which rule could the function machine be using?

- A. $Q - 1$ B. $Q + 1$
 C. $Q \div 6$ D. $Q \div 1$

8)

In	Out
36	4
45	5
54	6
90	10
81	9

If each input is 'Q' which rule could the function machine be using?

- A. $Q - 4$ B. $Q \div 8$
 C. $Q - 9$ D. $Q \div 9$

9)

In	Out
64	77
87	100
78	91
27	40
45	58

If each input is 'Q' which rule could the function machine be using?

- A. $Q \times 13$ B. $Q + 13$
 C. $Q + 10$ D. $Q + 6$

Answers

1. **B**
2. **D**
3. **C**
4. **C**
5. **D**
6. **D**
7. **A**
8. **D**
9. **B**



Determine which number sentence best matches the function machine.

Answers

1)

In	Out
18	25
79	86
66	73
45	52
80	87

If each input is 'Q' which rule could the function machine be using?

- A. $Q - 7$ B. $Q + 9$
 C. $Q \div 7$ D. $Q + 7$

2)

In	Out
3	21
6	42
2	14
7	49
8	56

If each input is 'Q' which rule could the function machine be using?

- A. $Q \div 7$ B. $Q - 7$
 C. $Q \times 7$ D. $Q \times 7$

3)

In	Out
4	32
2	16
3	24
10	80
8	64

If each input is 'Q' which rule could the function machine be using?

- A. $Q \times 7$ B. $Q + 9$
 C. $Q \div 8$ D. $Q \times 8$

4)

In	Out
34	35
94	95
68	69
46	47
54	55

If each input is 'Q' which rule could the function machine be using?

- A. $Q + 3$ B. $Q + 1$
 C. $Q \times 9$ D. $Q \div 1$

5)

In	Out
104	90
92	78
113	99
43	29
52	38

If each input is 'Q' which rule could the function machine be using?

- A. $Q - 8$ B. $Q - 14$
 C. $Q \times 14$ D. $Q + 14$

6)

In	Out
114	97
39	22
60	43
84	67
101	84

If each input is 'Q' which rule could the function machine be using?

- A. $Q - 17$ B. $Q - 4$
 C. $Q \times 17$ D. $Q \div 17$

7)

In	Out
32	8
36	9
16	4
40	10
24	6

If each input is 'Q' which rule could the function machine be using?

- A. $Q \div 4$ B. $Q \div 8$
 C. $Q - 4$ D. $Q - 3$

8)

In	Out
8	72
3	27
10	90
6	54
2	18

If each input is 'Q' which rule could the function machine be using?

- A. $Q \times 5$ B. $Q \times 9$
 C. $Q \div 9$ D. $Q \times 7$

9)

In	Out
38	57
69	88
40	59
97	116
17	36

If each input is 'Q' which rule could the function machine be using?

- A. $Q + 9$ B. $Q \times 6$
 C. $Q \div 19$ D. $Q + 19$

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____



Determine which number sentence best matches the function machine.

1)

In	Out
18	25
79	86
66	73
45	52
80	87

If each input is 'Q' which rule could the function machine be using?

- A. $Q - 7$ B. $Q + 9$
 C. $Q \div 7$ D. $Q + 7$

2)

In	Out
3	21
6	42
2	14
7	49
8	56

If each input is 'Q' which rule could the function machine be using?

- A. $Q \div 7$ B. $Q - 7$
 C. $Q \times 7$ D. $Q \times 7$

3)

In	Out
4	32
2	16
3	24
10	80
8	64

If each input is 'Q' which rule could the function machine be using?

- A. $Q \times 7$ B. $Q + 9$
 C. $Q \div 8$ D. $Q \times 8$

4)

In	Out
34	35
94	95
68	69
46	47
54	55

If each input is 'Q' which rule could the function machine be using?

- A. $Q + 3$ B. $Q + 1$
 C. $Q \times 9$ D. $Q \div 1$

5)

In	Out
104	90
92	78
113	99
43	29
52	38

If each input is 'Q' which rule could the function machine be using?

- A. $Q - 8$ B. $Q - 14$
 C. $Q \times 14$ D. $Q + 14$

6)

In	Out
114	97
39	22
60	43
84	67
101	84

If each input is 'Q' which rule could the function machine be using?

- A. $Q - 17$ B. $Q - 4$
 C. $Q \times 17$ D. $Q \div 17$

7)

In	Out
32	8
36	9
16	4
40	10
24	6

If each input is 'Q' which rule could the function machine be using?

- A. $Q \div 4$ B. $Q \div 8$
 C. $Q - 4$ D. $Q - 3$

8)

In	Out
8	72
3	27
10	90
6	54
2	18

If each input is 'Q' which rule could the function machine be using?

- A. $Q \times 5$ B. $Q \times 9$
 C. $Q \div 9$ D. $Q \times 7$

9)

In	Out
38	57
69	88
40	59
97	116
17	36

If each input is 'Q' which rule could the function machine be using?

- A. $Q + 9$ B. $Q \times 6$
 C. $Q \div 19$ D. $Q + 19$

Answers

1. **D**
2. **C**
3. **D**
4. **B**
5. **B**
6. **A**
7. **A**
8. **B**
9. **D**



Determine which number sentence best matches the function machine.

Answers

1)

In	Out
9	36
3	12
8	32
5	20
6	24

If each input is 'Q' which rule could the function machine be using?

- A. $Q + 4$ B. $Q \div 4$
 C. $Q \times 4$ D. $Q + 10$

2)

In	Out
63	61
10	8
7	5
70	68
71	69

If each input is 'Q' which rule could the function machine be using?

- A. $Q \times 2$ B. $Q - 2$
 C. $Q - 4$ D. $Q \div 2$

3)

In	Out
12	25
18	31
81	94
84	97
22	35

If each input is 'Q' which rule could the function machine be using?

- A. $Q - 13$ B. $Q \times 2$
 C. $Q + 13$ D. $Q \times 6$

4)

In	Out
70	66
46	42
18	14
58	54
41	37

If each input is 'Q' which rule could the function machine be using?

- A. $Q - 9$ B. $Q \div 2$
 C. $Q \div 4$ D. $Q - 4$

5)

In	Out
25	26
42	43
92	93
18	19
47	48

If each input is 'Q' which rule could the function machine be using?

- A. $Q \times 10$ B. $Q + 9$
 C. $Q + 1$ D. $Q \div 1$

6)

In	Out
5	15
10	30
2	6
9	27
3	9

If each input is 'Q' which rule could the function machine be using?

- A. $Q + 3$ B. $Q + 2$
 C. $Q \times 3$ D. $Q - 3$

7)

In	Out
9	45
4	20
8	40
3	15
6	30

If each input is 'Q' which rule could the function machine be using?

- A. $Q \times 6$ B. $Q \times 5$
 C. $Q \times 10$ D. $Q + 7$

8)

In	Out
40	8
35	7
25	5
10	2
30	6

If each input is 'Q' which rule could the function machine be using?

- A. $Q - 5$ B. $Q \div 5$
 C. $Q - 8$ D. $Q \div 7$

9)

In	Out
36	4
63	7
18	2
81	9
54	6

If each input is 'Q' which rule could the function machine be using?

- A. $Q - 9$ B. $Q - 3$
 C. $Q \div 9$ D. $Q \times 9$

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____



Determine which number sentence best matches the function machine.

1)

In	Out
9	36
3	12
8	32
5	20
6	24

If each input is 'Q' which rule could the function machine be using?

- A. $Q + 4$ B. $Q \div 4$
 C. $Q \times 4$ D. $Q + 10$

2)

In	Out
63	61
10	8
7	5
70	68
71	69

If each input is 'Q' which rule could the function machine be using?

- A. $Q \times 2$ B. $Q - 2$
 C. $Q - 4$ D. $Q \div 2$

3)

In	Out
12	25
18	31
81	94
84	97
22	35

If each input is 'Q' which rule could the function machine be using?

- A. $Q - 13$ B. $Q \times 2$
 C. $Q + 13$ D. $Q \times 6$

4)

In	Out
70	66
46	42
18	14
58	54
41	37

If each input is 'Q' which rule could the function machine be using?

- A. $Q - 9$ B. $Q \div 2$
 C. $Q \div 4$ D. $Q - 4$

5)

In	Out
25	26
42	43
92	93
18	19
47	48

If each input is 'Q' which rule could the function machine be using?

- A. $Q \times 10$ B. $Q + 9$
 C. $Q + 1$ D. $Q \div 1$

6)

In	Out
5	15
10	30
2	6
9	27
3	9

If each input is 'Q' which rule could the function machine be using?

- A. $Q + 3$ B. $Q + 2$
 C. $Q \times 3$ D. $Q - 3$

7)

In	Out
9	45
4	20
8	40
3	15
6	30

If each input is 'Q' which rule could the function machine be using?

- A. $Q \times 6$ B. $Q \times 5$
 C. $Q \times 10$ D. $Q + 7$

8)

In	Out
40	8
35	7
25	5
10	2
30	6

If each input is 'Q' which rule could the function machine be using?

- A. $Q - 5$ B. $Q \div 5$
 C. $Q - 8$ D. $Q \div 7$

9)

In	Out
36	4
63	7
18	2
81	9
54	6

If each input is 'Q' which rule could the function machine be using?

- A. $Q - 9$ B. $Q - 3$
 C. $Q \div 9$ D. $Q \times 9$

Answers

1. **C**
2. **B**
3. **C**
4. **D**
5. **C**
6. **C**
7. **B**
8. **B**
9. **C**



Determine which number sentence best matches the function machine.

Answers

1)

In	Out
63	7
90	10
72	8
45	5
81	9

If each input is 'Q' which rule could the function machine be using?

- A. $Q - 9$ B. $Q - 8$
 C. $Q \div 9$ D. $Q - 6$

2)

In	Out
89	84
33	28
96	91
102	97
19	14

If each input is 'Q' which rule could the function machine be using?

- A. $Q \times 5$ B. $Q + 5$
 C. $Q \div 8$ D. $Q - 5$

3)

In	Out
95	113
43	61
86	104
26	44
70	88

If each input is 'Q' which rule could the function machine be using?

- A. $Q - 18$ B. $Q + 18$
 C. $Q \div 18$ D. $Q \times 18$

4)

In	Out
69	68
60	59
68	67
84	83
37	36

If each input is 'Q' which rule could the function machine be using?

- A. $Q \div 6$ B. $Q - 8$
 C. $Q - 1$ D. $Q \div 8$

5)

In	Out
7	42
10	60
6	36
9	54
4	24

If each input is 'Q' which rule could the function machine be using?

- A. $Q \div 6$ B. $Q \times 6$
 C. $Q - 6$ D. $Q + 6$

6)

In	Out
48	8
30	5
18	3
36	6
60	10

If each input is 'Q' which rule could the function machine be using?

- A. $Q - 6$ B. $Q \div 6$
 C. $Q - 10$ D. $Q \times 6$

7)

In	Out
87	105
72	90
50	68
67	85
81	99

If each input is 'Q' which rule could the function machine be using?

- A. $Q + 10$ B. $Q + 18$
 C. $Q + 5$ D. $Q - 18$

8)

In	Out
31	51
86	106
1	21
27	47
17	37

If each input is 'Q' which rule could the function machine be using?

- A. $Q - 20$ B. $Q \div 20$
 C. $Q + 20$ D. $Q \times 10$

9)

In	Out
7	35
4	20
6	30
5	25
9	45

If each input is 'Q' which rule could the function machine be using?

- A. $Q + 9$ B. $Q \div 5$
 C. $Q \times 5$ D. $Q - 5$

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____



Determine which number sentence best matches the function machine.

1)

In	Out
63	7
90	10
72	8
45	5
81	9

If each input is 'Q' which rule could the function machine be using?

- A. $Q - 9$ B. $Q - 8$
 C. $Q \div 9$ D. $Q - 6$

2)

In	Out
89	84
33	28
96	91
102	97
19	14

If each input is 'Q' which rule could the function machine be using?

- A. $Q \times 5$ B. $Q + 5$
 C. $Q \div 8$ D. $Q - 5$

3)

In	Out
95	113
43	61
86	104
26	44
70	88

If each input is 'Q' which rule could the function machine be using?

- A. $Q - 18$ B. $Q + 18$
 C. $Q \div 18$ D. $Q \times 18$

4)

In	Out
69	68
60	59
68	67
84	83
37	36

If each input is 'Q' which rule could the function machine be using?

- A. $Q \div 6$ B. $Q - 8$
 C. $Q - 1$ D. $Q \div 8$

5)

In	Out
7	42
10	60
6	36
9	54
4	24

If each input is 'Q' which rule could the function machine be using?

- A. $Q \div 6$ B. $Q \times 6$
 C. $Q - 6$ D. $Q + 6$

6)

In	Out
48	8
30	5
18	3
36	6
60	10

If each input is 'Q' which rule could the function machine be using?

- A. $Q - 6$ B. $Q \div 6$
 C. $Q - 10$ D. $Q \times 6$

7)

In	Out
87	105
72	90
50	68
67	85
81	99

If each input is 'Q' which rule could the function machine be using?

- A. $Q + 10$ B. $Q + 18$
 C. $Q + 5$ D. $Q - 18$

8)

In	Out
31	51
86	106
1	21
27	47
17	37

If each input is 'Q' which rule could the function machine be using?

- A. $Q - 20$ B. $Q \div 20$
 C. $Q + 20$ D. $Q \times 10$

9)

In	Out
7	35
4	20
6	30
5	25
9	45

If each input is 'Q' which rule could the function machine be using?

- A. $Q + 9$ B. $Q \div 5$
 C. $Q \times 5$ D. $Q - 5$

Answers

1. **C**
2. **D**
3. **B**
4. **C**
5. **B**
6. **B**
7. **B**
8. **C**
9. **C**



Determine which number sentence best matches the function machine.

Answers

1)

In	Out
78	98
24	44
60	80
51	71
40	60

If each input is 'Q' which rule could the function machine be using?

- A. $Q + 20$ B. $Q \div 20$
 C. $Q + 6$ D. $Q \times 7$

2)

In	Out
83	71
102	90
57	45
60	48
63	51

If each input is 'Q' which rule could the function machine be using?

- A. $Q \div 6$ B. $Q - 7$
 C. $Q \div 12$ D. $Q - 12$

3)

In	Out
48	6
64	8
80	10
24	3
40	5

If each input is 'Q' which rule could the function machine be using?

- A. $Q + 8$ B. $Q \div 8$
 C. $Q \div 10$ D. $Q - 8$

4)

In	Out
70	69
21	20
26	25
11	10
29	28

If each input is 'Q' which rule could the function machine be using?

- A. $Q + 1$ B. $Q \div 1$
 C. $Q - 1$ D. $Q - 8$

5)

In	Out
45	5
90	10
81	9
27	3
72	8

If each input is 'Q' which rule could the function machine be using?

- A. $Q \div 9$ B. $Q \div 2$
 C. $Q - 8$ D. $Q \times 9$

6)

In	Out
5	20
4	16
6	24
10	40
7	28

If each input is 'Q' which rule could the function machine be using?

- A. $Q \times 4$ B. $Q \times 10$
 C. $Q + 7$ D. $Q \times 4$

7)

In	Out
28	42
24	38
92	106
67	81
48	62

If each input is 'Q' which rule could the function machine be using?

- A. $Q \div 14$ B. $Q + 5$
 C. $Q + 14$ D. $Q \times 6$

8)

In	Out
5	18
78	91
4	17
56	69
64	77

If each input is 'Q' which rule could the function machine be using?

- A. $Q - 13$ B. $Q + 13$
 C. $Q \times 8$ D. $Q + 3$

9)

In	Out
10	30
6	18
8	24
2	6
5	15

If each input is 'Q' which rule could the function machine be using?

- A. $Q + 3$ B. $Q - 3$
 C. $Q \times 3$ D. $Q + 7$

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____



Determine which number sentence best matches the function machine.

1)

In	Out
78	98
24	44
60	80
51	71
40	60

If each input is 'Q' which rule could the function machine be using?

- A. $Q + 20$ B. $Q \div 20$
 C. $Q + 6$ D. $Q \times 7$

2)

In	Out
83	71
102	90
57	45
60	48
63	51

If each input is 'Q' which rule could the function machine be using?

- A. $Q \div 6$ B. $Q - 7$
 C. $Q \div 12$ D. $Q - 12$

3)

In	Out
48	6
64	8
80	10
24	3
40	5

If each input is 'Q' which rule could the function machine be using?

- A. $Q + 8$ B. $Q \div 8$
 C. $Q \div 10$ D. $Q - 8$

4)

In	Out
70	69
21	20
26	25
11	10
29	28

If each input is 'Q' which rule could the function machine be using?

- A. $Q + 1$ B. $Q \div 1$
 C. $Q - 1$ D. $Q - 8$

5)

In	Out
45	5
90	10
81	9
27	3
72	8

If each input is 'Q' which rule could the function machine be using?

- A. $Q \div 9$ B. $Q \div 2$
 C. $Q - 8$ D. $Q \times 9$

6)

In	Out
5	20
4	16
6	24
10	40
7	28

If each input is 'Q' which rule could the function machine be using?

- A. $Q \times 4$ B. $Q \times 10$
 C. $Q + 7$ D. $Q \times 4$

7)

In	Out
28	42
24	38
92	106
67	81
48	62

If each input is 'Q' which rule could the function machine be using?

- A. $Q \div 14$ B. $Q + 5$
 C. $Q + 14$ D. $Q \times 6$

8)

In	Out
5	18
78	91
4	17
56	69
64	77

If each input is 'Q' which rule could the function machine be using?

- A. $Q - 13$ B. $Q + 13$
 C. $Q \times 8$ D. $Q + 3$

9)

In	Out
10	30
6	18
8	24
2	6
5	15

If each input is 'Q' which rule could the function machine be using?

- A. $Q + 3$ B. $Q - 3$
 C. $Q \times 3$ D. $Q + 7$

Answers

1. **A**
2. **D**
3. **B**
4. **C**
5. **A**
6. **A**
7. **C**
8. **B**
9. **C**



Determine which number sentence best matches the function machine.

Answers

1)

In	Out
2	20
8	80
5	50
6	60
7	70

If each input is 'Q' which rule could the function machine be using?

- A. $Q + 10$ B. $Q \times 6$
C. $Q \times 10$ D. $Q \times 3$

2)

In	Out
10	5
6	3
4	2
8	4
20	10

If each input is 'Q' which rule could the function machine be using?

- A. $Q \div 6$ B. $Q + 2$
C. $Q \div 2$ D. $Q - 2$

3)

In	Out
37	28
98	89
82	73
16	7
99	90

If each input is 'Q' which rule could the function machine be using?

- A. $Q - 8$ B. $Q - 5$
C. $Q \div 5$ D. $Q - 9$

4)

In	Out
60	59
35	34
76	75
34	33
15	14

If each input is 'Q' which rule could the function machine be using?

- A. $Q - 1$ B. $Q - 7$
C. $Q \div 2$ D. $Q \times 1$

5)

In	Out
8	80
9	90
3	30
10	100
5	50

If each input is 'Q' which rule could the function machine be using?

- A. $Q \times 2$ B. $Q + 10$
C. $Q \times 10$ D. $Q \div 10$

6)

In	Out
15	3
40	8
10	2
45	9
20	4

If each input is 'Q' which rule could the function machine be using?

- A. $Q - 5$ B. $Q \div 8$
C. $Q + 5$ D. $Q \div 5$

7)

In	Out
89	92
91	94
44	47
98	101
22	25

If each input is 'Q' which rule could the function machine be using?

- A. $Q \times 6$ B. $Q + 3$
C. $Q - 3$ D. $Q \times 3$

8)

In	Out
85	104
5	24
21	40
81	100
17	36

If each input is 'Q' which rule could the function machine be using?

- A. $Q \times 3$ B. $Q + 10$
C. $Q \div 19$ D. $Q + 19$

9)

In	Out
4	36
2	18
8	72
10	90
7	63

If each input is 'Q' which rule could the function machine be using?

- A. $Q \times 5$ B. $Q + 3$
C. $Q \times 9$ D. $Q - 9$

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____



Determine which number sentence best matches the function machine.

1)

In	Out
2	20
8	80
5	50
6	60
7	70

If each input is 'Q' which rule could the function machine be using?

- A. $Q + 10$ B. $Q \times 6$
 C. $Q \times 10$ D. $Q \times 3$

2)

In	Out
10	5
6	3
4	2
8	4
20	10

If each input is 'Q' which rule could the function machine be using?

- A. $Q \div 6$ B. $Q + 2$
 C. $Q \div 2$ D. $Q - 2$

3)

In	Out
37	28
98	89
82	73
16	7
99	90

If each input is 'Q' which rule could the function machine be using?

- A. $Q - 8$ B. $Q - 5$
 C. $Q \div 5$ D. $Q - 9$

4)

In	Out
60	59
35	34
76	75
34	33
15	14

If each input is 'Q' which rule could the function machine be using?

- A. $Q - 1$ B. $Q - 7$
 C. $Q \div 2$ D. $Q \times 1$

5)

In	Out
8	80
9	90
3	30
10	100
5	50

If each input is 'Q' which rule could the function machine be using?

- A. $Q \times 2$ B. $Q + 10$
 C. $Q \times 10$ D. $Q \div 10$

6)

In	Out
15	3
40	8
10	2
45	9
20	4

If each input is 'Q' which rule could the function machine be using?

- A. $Q - 5$ B. $Q \div 8$
 C. $Q + 5$ D. $Q \div 5$

7)

In	Out
89	92
91	94
44	47
98	101
22	25

If each input is 'Q' which rule could the function machine be using?

- A. $Q \times 6$ B. $Q + 3$
 C. $Q - 3$ D. $Q \times 3$

8)

In	Out
85	104
5	24
21	40
81	100
17	36

If each input is 'Q' which rule could the function machine be using?

- A. $Q \times 3$ B. $Q + 10$
 C. $Q \div 19$ D. $Q + 19$

9)

In	Out
4	36
2	18
8	72
10	90
7	63

If each input is 'Q' which rule could the function machine be using?

- A. $Q \times 5$ B. $Q + 3$
 C. $Q \times 9$ D. $Q - 9$

Answers

1. **C**
2. **C**
3. **D**
4. **A**
5. **C**
6. **D**
7. **B**
8. **D**
9. **C**



Determine which number sentence best matches the function machine.

Answers

1)

In	Out
59	57
100	98
21	19
91	89
30	28

If each input is 'Q' which rule could the function machine be using?

- A. $Q - 8$ B. $Q + 2$
 C. $Q \div 2$ D. $Q - 2$

2)

In	Out
10	40
9	36
8	32
4	16
6	24

If each input is 'Q' which rule could the function machine be using?

- A. $Q \times 5$ B. $Q \times 4$
 C. $Q \times 9$ D. $Q - 4$

3)

In	Out
8	72
6	54
4	36
3	27
2	18

If each input is 'Q' which rule could the function machine be using?

- A. $Q \times 4$ B. $Q \times 10$
 C. $Q + 9$ D. $Q \times 9$

4)

In	Out
94	99
45	50
66	71
50	55
65	70

If each input is 'Q' which rule could the function machine be using?

- A. $Q + 3$ B. $Q + 5$
 C. $Q \times 5$ D. $Q \times 10$

5)

In	Out
28	7
8	2
24	6
40	10
32	8

If each input is 'Q' which rule could the function machine be using?

- A. $Q - 8$ B. $Q + 4$
 C. $Q - 7$ D. $Q \div 4$

6)

In	Out
12	2
24	4
54	9
30	5
60	10

If each input is 'Q' which rule could the function machine be using?

- A. $Q - 6$ B. $Q \div 6$
 C. $Q + 6$ D. $Q \div 3$

7)

In	Out
38	26
93	81
87	75
111	99
15	3

If each input is 'Q' which rule could the function machine be using?

- A. $Q \div 3$ B. $Q - 12$
 C. $Q \div 10$ D. $Q \div 12$

8)

In	Out
51	36
75	60
55	40
33	18
70	55

If each input is 'Q' which rule could the function machine be using?

- A. $Q - 6$ B. $Q - 15$
 C. $Q \times 15$ D. $Q \div 2$

9)

In	Out
80	84
22	26
95	99
34	38
23	27

If each input is 'Q' which rule could the function machine be using?

- A. $Q \times 2$ B. $Q + 4$
 C. $Q \times 7$ D. $Q + 5$

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____



Determine which number sentence best matches the function machine.

1)

In	Out
59	57
100	98
21	19
91	89
30	28

If each input is 'Q' which rule could the function machine be using?

- A. $Q - 8$ B. $Q + 2$
 C. $Q \div 2$ D. $Q - 2$

2)

In	Out
10	40
9	36
8	32
4	16
6	24

If each input is 'Q' which rule could the function machine be using?

- A. $Q \times 5$ B. $Q \times 4$
 C. $Q \times 9$ D. $Q - 4$

3)

In	Out
8	72
6	54
4	36
3	27
2	18

If each input is 'Q' which rule could the function machine be using?

- A. $Q \times 4$ B. $Q \times 10$
 C. $Q + 9$ D. $Q \times 9$

4)

In	Out
94	99
45	50
66	71
50	55
65	70

If each input is 'Q' which rule could the function machine be using?

- A. $Q + 3$ B. $Q + 5$
 C. $Q \times 5$ D. $Q \times 10$

5)

In	Out
28	7
8	2
24	6
40	10
32	8

If each input is 'Q' which rule could the function machine be using?

- A. $Q - 8$ B. $Q + 4$
 C. $Q - 7$ D. $Q \div 4$

6)

In	Out
12	2
24	4
54	9
30	5
60	10

If each input is 'Q' which rule could the function machine be using?

- A. $Q - 6$ B. $Q \div 6$
 C. $Q + 6$ D. $Q \div 3$

7)

In	Out
38	26
93	81
87	75
111	99
15	3

If each input is 'Q' which rule could the function machine be using?

- A. $Q \div 3$ B. $Q - 12$
 C. $Q \div 10$ D. $Q \div 12$

8)

In	Out
51	36
75	60
55	40
33	18
70	55

If each input is 'Q' which rule could the function machine be using?

- A. $Q - 6$ B. $Q - 15$
 C. $Q \times 15$ D. $Q \div 2$

9)

In	Out
80	84
22	26
95	99
34	38
23	27

If each input is 'Q' which rule could the function machine be using?

- A. $Q \times 2$ B. $Q + 4$
 C. $Q \times 7$ D. $Q + 5$

Answers

1. **D**
2. **B**
3. **D**
4. **B**
5. **D**
6. **B**
7. **B**
8. **B**
9. **B**