



Determine which number sentence best matches the function machine.

Answers

1)

In	Out
41	25
66	50
28	12
113	97
35	19

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

- A. $Q - 5$ B. $Q - 16$
C. $Q + 16$ D. $Q \div 4$

2)

In	Out
35	5
56	8
28	4
49	7
42	6

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

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

3)

In	Out
69	83
60	74
85	99
12	26
10	24

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

- A. $Q + 14$ B. $Q \div 14$
C. $Q \cdot 5$ D. $Q + 9$

4)

In	Out
26	35
13	22
66	75
30	39
60	69

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

- A. $Q \cdot 10$ B. $Q + 9$
C. $Q \div 9$ D. $Q + 7$

5)

In	Out
30	10
27	9
9	3
15	5
12	4

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

- A. $Q - 9$ B. $Q - 4$
C. $Q \div 5$ D. $Q \div 3$

6)

In	Out
51	34
81	64
22	5
28	11
90	73

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

- A. $Q - 4$ B. $Q \div 5$
C. $Q \div 4$ D. $Q - 17$

7)

In	Out
10	90
7	63
8	72
5	45
4	36

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

- A. $Q + 4$ B. $Q \cdot 6$
C. $Q - 9$ D. $Q \cdot 9$

8)

In	Out
90	10
27	3
18	2
36	4
45	5

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

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

9)

In	Out
33	15
29	11
115	97
99	81
91	73

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

- A. $Q \div 6$ B. $Q \cdot 18$
C. $Q - 2$ D. $Q - 18$

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



Determine which number sentence best matches the function machine.

1)

In	Out
41	25
66	50
28	12
113	97
35	19

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

- A. $Q - 5$ B. $Q - 16$
C. $Q + 16$ D. $Q \div 4$

2)

In	Out
35	5
56	8
28	4
49	7
42	6

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

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

3)

In	Out
69	83
60	74
85	99
12	26
10	24

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

- A. $Q + 14$ B. $Q \div 14$
C. $Q \cdot 5$ D. $Q + 9$

4)

In	Out
26	35
13	22
66	75
30	39
60	69

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

- A. $Q \cdot 10$ B. $Q + 9$
C. $Q \div 9$ D. $Q + 7$

5)

In	Out
30	10
27	9
9	3
15	5
12	4

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

- A. $Q - 9$ B. $Q - 4$
C. $Q \div 5$ D. $Q \div 3$

6)

In	Out
51	34
81	64
22	5
28	11
90	73

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

- A. $Q - 4$ B. $Q \div 5$
C. $Q \div 4$ D. $Q - 17$

7)

In	Out
10	90
7	63
8	72
5	45
4	36

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

- A. $Q + 4$ B. $Q \cdot 6$
C. $Q - 9$ D. $Q \cdot 9$

8)

In	Out
90	10
27	3
18	2
36	4
45	5

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

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

9)

In	Out
33	15
29	11
115	97
99	81
91	73

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

- A. $Q \div 6$ B. $Q \cdot 18$
C. $Q - 2$ D. $Q - 18$

Answers

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



Determine which number sentence best matches the function machine.

Answers

1)

In	Out
96	116
13	33
72	92
93	113
9	29

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

- A. $Q + 20$ B. $Q \cdot 5$
 C. $Q \div 20$ D. $Q \cdot 20$

2)

In	Out
39	40
46	47
96	97
5	6
44	45

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

- A. $Q + 1$ B. $Q - 1$
 C. $Q \cdot 1$ D. $Q \cdot 2$

3)

In	Out
40	21
41	22
48	29
110	91
108	89

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

- A. $Q \div 19$ B. $Q \cdot 19$
 C. $Q + 19$ D. $Q - 19$

4)

In	Out
8	24
9	27
5	15
6	18
7	21

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

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

5)

In	Out
18	3
24	4
36	6
30	5
12	2

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

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

6)

In	Out
112	95
102	85
25	8
55	38
110	93

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

- A. $Q - 17$ B. $Q \div 5$
 C. $Q \div 2$ D. $Q - 6$

7)

In	Out
81	87
62	68
27	33
66	72
18	24

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

- A. $Q + 2$ B. $Q \cdot 4$
 C. $Q + 8$ D. $Q + 6$

8)

In	Out
16	2
64	8
80	10
24	3
72	9

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

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

9)

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

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

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

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



Determine which number sentence best matches the function machine.

1)

In	Out
96	116
13	33
72	92
93	113
9	29

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

- A. $Q + 20$ B. $Q \cdot 5$
 C. $Q \div 20$ D. $Q \cdot 20$

2)

In	Out
39	40
46	47
96	97
5	6
44	45

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

- A. $Q + 1$ B. $Q - 1$
 C. $Q \cdot 1$ D. $Q \cdot 2$

3)

In	Out
40	21
41	22
48	29
110	91
108	89

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

- A. $Q \div 19$ B. $Q \cdot 19$
 C. $Q + 19$ D. $Q - 19$

4)

In	Out
8	24
9	27
5	15
6	18
7	21

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

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

5)

In	Out
18	3
24	4
36	6
30	5
12	2

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

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

6)

In	Out
112	95
102	85
25	8
55	38
110	93

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

- A. $Q - 17$ B. $Q \div 5$
 C. $Q \div 2$ D. $Q - 6$

7)

In	Out
81	87
62	68
27	33
66	72
18	24

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

- A. $Q + 2$ B. $Q \cdot 4$
 C. $Q + 8$ D. $Q + 6$

8)

In	Out
16	2
64	8
80	10
24	3
72	9

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

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

9)

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

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

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

Answers

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



Determine which number sentence best matches the function machine.

Answers

1)

In	Out
104	95
22	13
46	37
75	66
107	98

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

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

2)

In	Out
37	50
22	35
74	87
61	74
83	96

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

- A. $Q + 13$ B. $Q \div 13$
 C. $Q + 9$ D. $Q + 10$

3)

In	Out
20	5
40	10
8	2
32	8
16	4

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

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

4)

In	Out
6	18
8	24
7	21
3	9
10	30

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

- A. $Q + 5$ B. $Q \cdot 3$
 C. $Q \cdot 7$ D. $Q \div 3$

5)

In	Out
69	55
101	87
42	28
96	82
62	48

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

- A. $Q - 10$ B. $Q \div 8$
 C. $Q - 14$ D. $Q \cdot 14$

6)

In	Out
10	80
8	64
7	56
9	72
6	48

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

- A. $Q + 2$ B. $Q + 8$
 C. $Q \cdot 8$ D. $Q \cdot 6$

7)

In	Out
94	91
18	15
15	12
61	58
35	32

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

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

8)

In	Out
13	15
74	76
93	95
4	6
72	74

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

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

9)

In	Out
73	75
50	52
18	20
23	25
70	72

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

- A. $Q + 10$ B. $Q + 2$
 C. $Q - 2$ 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
104	95
22	13
46	37
75	66
107	98

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

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

2)

In	Out
37	50
22	35
74	87
61	74
83	96

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

- A. $Q + 13$ B. $Q \div 13$
 C. $Q + 9$ D. $Q + 10$

3)

In	Out
20	5
40	10
8	2
32	8
16	4

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

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

4)

In	Out
6	18
8	24
7	21
3	9
10	30

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

- A. $Q + 5$ B. $Q \cdot 3$
 C. $Q \cdot 7$ D. $Q \div 3$

5)

In	Out
69	55
101	87
42	28
96	82
62	48

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

- A. $Q - 10$ B. $Q \div 8$
 C. $Q - 14$ D. $Q \cdot 14$

6)

In	Out
10	80
8	64
7	56
9	72
6	48

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

- A. $Q + 2$ B. $Q + 8$
 C. $Q \cdot 8$ D. $Q \cdot 6$

7)

In	Out
94	91
18	15
15	12
61	58
35	32

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

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

8)

In	Out
13	15
74	76
93	95
4	6
72	74

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

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

9)

In	Out
73	75
50	52
18	20
23	25
70	72

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

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

Answers

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



Determine which number sentence best matches the function machine.

Answers

1)

In	Out
60	44
75	59
30	14
79	63
73	57

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

- A. $Q - 16$ B. $Q \cdot 16$
 C. $Q \div 3$ D. $Q \div 16$

2)

In	Out
21	3
28	4
63	9
14	2
56	8

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

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

3)

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

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

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

4)

In	Out
4	12
8	24
3	9
5	15
7	21

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

- A. $Q + 5$ B. $Q + 3$
 C. $Q \cdot 3$ D. $Q + 6$

5)

In	Out
41	23
80	62
87	69
78	60
23	5

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

- A. $Q + 18$ B. $Q \div 3$
 C. $Q - 18$ D. $Q - 8$

6)

In	Out
54	6
45	5
63	7
81	9
72	8

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

- A. $Q - 3$ B. $Q \div 9$
 C. $Q \div 2$ D. $Q - 9$

7)

In	Out
3	21
4	28
2	14
6	42
5	35

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

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

8)

In	Out
54	57
45	48
83	86
46	49
55	58

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

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

9)

In	Out
90	108
2	20
39	57
18	36
82	100

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

- A. $Q - 18$ B. $Q \cdot 8$
 C. $Q + 18$ D. $Q + 2$

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



Determine which number sentence best matches the function machine.

1)

In	Out
60	44
75	59
30	14
79	63
73	57

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

- A. $Q - 16$ B. $Q \cdot 16$
 C. $Q \div 3$ D. $Q \div 16$

2)

In	Out
21	3
28	4
63	9
14	2
56	8

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

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

3)

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

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

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

4)

In	Out
4	12
8	24
3	9
5	15
7	21

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

- A. $Q + 5$ B. $Q + 3$
 C. $Q \cdot 3$ D. $Q + 6$

5)

In	Out
41	23
80	62
87	69
78	60
23	5

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

- A. $Q + 18$ B. $Q \div 3$
 C. $Q - 18$ D. $Q - 8$

6)

In	Out
54	6
45	5
63	7
81	9
72	8

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

- A. $Q - 3$ B. $Q \div 9$
 C. $Q \div 2$ D. $Q - 9$

7)

In	Out
3	21
4	28
2	14
6	42
5	35

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

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

8)

In	Out
54	57
45	48
83	86
46	49
55	58

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

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

9)

In	Out
90	108
2	20
39	57
18	36
82	100

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

- A. $Q - 18$ B. $Q \cdot 8$
 C. $Q + 18$ D. $Q + 2$

Answers

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



Determine which number sentence best matches the function machine.

Answers

1)

In	Out
98	105
33	40
21	28
40	47
8	15

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

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

2)

In	Out
18	32
7	21
53	67
28	42
31	45

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

- A. $Q \cdot 7$ B. $Q - 14$
 C. $Q + 14$ D. $Q \cdot 14$

3)

In	Out
86	75
28	17
71	60
102	91
18	7

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

- A. $Q \div 6$ B. $Q \div 2$
 C. $Q - 5$ D. $Q - 11$

4)

In	Out
96	115
95	114
53	72
79	98
58	77

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

- A. $Q + 19$ B. $Q + 9$
 C. $Q \cdot 19$ D. $Q + 4$

5)

In	Out
40	10
24	6
8	2
20	5
32	8

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

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

6)

In	Out
90	10
27	3
54	6
36	4
81	9

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

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

7)

In	Out
9	36
7	28
8	32
3	12
4	16

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

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

8)

In	Out
100	84
24	8
17	1
38	22
55	39

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

- A. $Q \div 5$ B. $Q - 16$
 C. $Q \cdot 16$ D. $Q - 3$

9)

In	Out
101	98
97	94
8	5
32	29
93	90

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

- A. $Q - 3$ B. $Q \cdot 3$
 C. $Q - 6$ 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
98	105
33	40
21	28
40	47
8	15

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

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

2)

In	Out
18	32
7	21
53	67
28	42
31	45

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

- A. $Q \cdot 7$ B. $Q - 14$
 C. $Q + 14$ D. $Q \cdot 14$

3)

In	Out
86	75
28	17
71	60
102	91
18	7

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

- A. $Q \div 6$ B. $Q \div 2$
 C. $Q - 5$ D. $Q - 11$

4)

In	Out
96	115
95	114
53	72
79	98
58	77

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

- A. $Q + 19$ B. $Q + 9$
 C. $Q \cdot 19$ D. $Q + 4$

5)

In	Out
40	10
24	6
8	2
20	5
32	8

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

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

6)

In	Out
90	10
27	3
54	6
36	4
81	9

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

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

7)

In	Out
9	36
7	28
8	32
3	12
4	16

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

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

8)

In	Out
100	84
24	8
17	1
38	22
55	39

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

- A. $Q \div 5$ B. $Q - 16$
 C. $Q \cdot 16$ D. $Q - 3$

9)

In	Out
101	98
97	94
8	5
32	29
93	90

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

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

Answers

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



Determine which number sentence best matches the function machine.

Answers

1)

In	Out
29	34
24	29
40	45
98	103
50	55

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

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

2)

In	Out
29	23
88	82
18	12
102	96
103	97

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

- A. $Q - 6$ B. $Q \div 6$
 C. $Q - 3$ D. $Q \div 5$

3)

In	Out
8	48
3	18
10	60
5	30
4	24

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

- A. $Q + 9$ B. $Q \cdot 6$
 C. $Q \div 6$ D. $Q + 2$

4)

In	Out
27	3
81	9
54	6
63	7
45	5

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

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

5)

In	Out
60	47
56	43
18	5
64	51
40	27

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

- A. $Q \div 13$ B. $Q \div 10$
 C. $Q - 13$ D. $Q \div 2$

6)

In	Out
30	6
15	3
10	2
50	10
20	4

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

- A. $Q - 7$ B. $Q \div 5$
 C. $Q \div 2$ D. $Q \div 3$

7)

In	Out
67	83
79	95
81	97
18	34
87	103

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

- A. $Q \cdot 4$ B. $Q \cdot 16$
 C. $Q \div 16$ D. $Q + 16$

8)

In	Out
3	9
7	21
9	27
4	12
5	15

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

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

9)

In	Out
35	5
70	10
42	6
49	7
21	3

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

- A. $Q - 7$ B. $Q \div 9$
 C. $Q - 3$ D. $Q \div 7$

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



Determine which number sentence best matches the function machine.

1)

In	Out
29	34
24	29
40	45
98	103
50	55

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

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

2)

In	Out
29	23
88	82
18	12
102	96
103	97

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

- A. $Q - 6$ B. $Q \div 6$
 C. $Q - 3$ D. $Q \div 5$

3)

In	Out
8	48
3	18
10	60
5	30
4	24

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

- A. $Q + 9$ B. $Q \cdot 6$
 C. $Q \div 6$ D. $Q + 2$

4)

In	Out
27	3
81	9
54	6
63	7
45	5

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

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

5)

In	Out
60	47
56	43
18	5
64	51
40	27

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

- A. $Q \div 13$ B. $Q \div 10$
 C. $Q - 13$ D. $Q \div 2$

6)

In	Out
30	6
15	3
10	2
50	10
20	4

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

- A. $Q - 7$ B. $Q \div 5$
 C. $Q \div 2$ D. $Q \div 3$

7)

In	Out
67	83
79	95
81	97
18	34
87	103

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

- A. $Q \cdot 4$ B. $Q \cdot 16$
 C. $Q \div 16$ D. $Q + 16$

8)

In	Out
3	9
7	21
9	27
4	12
5	15

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

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

9)

In	Out
35	5
70	10
42	6
49	7
21	3

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

- A. $Q - 7$ B. $Q \div 9$
 C. $Q - 3$ D. $Q \div 7$

Answers

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



Determine which number sentence best matches the function machine.

Answers

1)

In	Out
74	83
81	90
13	22
12	21
11	20

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

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

2)

In	Out
12	6
4	2
10	5
6	3
14	7

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

- A. $Q \div 5$ B. $Q - 2$
 C. $Q - 9$ D. $Q \div 2$

3)

In	Out
40	10
36	9
16	4
24	6
28	7

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

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

4)

In	Out
2	6
8	24
5	15
7	21
3	9

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

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

5)

In	Out
90	9
60	6
30	3
40	4
20	2

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

- A. $Q - 7$ B. $Q \div 10$
 C. $Q \cdot 10$ D. $Q + 10$

6)

In	Out
6	42
8	56
4	28
3	21
5	35

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

- A. $Q \div 7$ B. $Q \cdot 10$
 C. $Q - 7$ D. $Q \cdot 7$

7)

In	Out
77	69
100	92
16	8
87	79
81	73

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

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

8)

In	Out
87	74
19	6
48	35
43	30
59	46

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

- A. $Q \div 6$ B. $Q - 9$
 C. $Q - 13$ D. $Q - 4$

9)

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

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

- A. $Q - 2$ B. $Q \cdot 2$
 C. $Q \cdot 3$ D. $Q + 9$

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



Determine which number sentence best matches the function machine.

1)

In	Out
74	83
81	90
13	22
12	21
11	20

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

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

2)

In	Out
12	6
4	2
10	5
6	3
14	7

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

- A. $Q \div 5$ B. $Q - 2$
 C. $Q - 9$ D. $Q \div 2$

3)

In	Out
40	10
36	9
16	4
24	6
28	7

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

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

4)

In	Out
2	6
8	24
5	15
7	21
3	9

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

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

5)

In	Out
90	9
60	6
30	3
40	4
20	2

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

- A. $Q - 7$ B. $Q \div 10$
 C. $Q \cdot 10$ D. $Q + 10$

6)

In	Out
6	42
8	56
4	28
3	21
5	35

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

- A. $Q \div 7$ B. $Q \cdot 10$
 C. $Q - 7$ D. $Q \cdot 7$

7)

In	Out
77	69
100	92
16	8
87	79
81	73

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

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

8)

In	Out
87	74
19	6
48	35
43	30
59	46

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

- A. $Q \div 6$ B. $Q - 9$
 C. $Q - 13$ D. $Q - 4$

9)

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

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

- A. $Q - 2$ B. $Q \cdot 2$
 C. $Q \cdot 3$ D. $Q + 9$

Answers

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



Determine which number sentence best matches the function machine.

Answers

1)

In	Out
10	100
6	60
4	40
3	30
5	50

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

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

2)

In	Out
74	60
112	98
40	26
38	24
27	13

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

- A. $Q \cdot 14$ B. $Q \div 4$
 C. $Q - 14$ D. $Q - 4$

3)

In	Out
54	45
37	28
85	76
99	90
90	81

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

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

4)

In	Out
7	21
10	30
3	9
5	15
2	6

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

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

5)

In	Out
12	4
15	5
27	9
24	8
21	7

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

- A. $Q \div 9$ B. $Q \div 6$
 C. $Q - 3$ D. $Q \div 3$

6)

In	Out
7	25
34	52
10	28
53	71
82	100

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

- A. $Q - 18$ B. $Q + 18$
 C. $Q \cdot 3$ D. $Q \cdot 18$

7)

In	Out
10	70
9	63
2	14
6	42
4	28

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

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

8)

In	Out
95	102
8	15
59	66
14	21
13	20

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

- A. $Q \cdot 10$ B. $Q \div 7$
 C. $Q + 7$ D. $Q \cdot 7$

9)

In	Out
45	48
51	54
37	40
30	33
38	41

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

- A. $Q + 4$ B. $Q + 3$
 C. $Q \cdot 3$ 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	100
6	60
4	40
3	30
5	50

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

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

2)

In	Out
74	60
112	98
40	26
38	24
27	13

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

- A. $Q \cdot 14$ B. $Q \div 4$
 C. $Q - 14$ D. $Q - 4$

3)

In	Out
54	45
37	28
85	76
99	90
90	81

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

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

4)

In	Out
7	21
10	30
3	9
5	15
2	6

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

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

5)

In	Out
12	4
15	5
27	9
24	8
21	7

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

- A. $Q \div 9$ B. $Q \div 6$
 C. $Q - 3$ D. $Q \div 3$

6)

In	Out
7	25
34	52
10	28
53	71
82	100

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

- A. $Q - 18$ B. $Q + 18$
 C. $Q \cdot 3$ D. $Q \cdot 18$

7)

In	Out
10	70
9	63
2	14
6	42
4	28

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

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

8)

In	Out
95	102
8	15
59	66
14	21
13	20

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

- A. $Q \cdot 10$ B. $Q \div 7$
 C. $Q + 7$ D. $Q \cdot 7$

9)

In	Out
45	48
51	54
37	40
30	33
38	41

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

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

Answers

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



Determine which number sentence best matches the function machine.

Answers

1)

In	Out
59	52
79	72
62	55
19	12
58	51

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

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

2)

In	Out
85	93
26	34
76	84
10	18
59	67

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

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

3)

In	Out
28	4
70	10
35	5
21	3
42	6

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

- A. $Q \div 7$ B. $Q \cdot 7$
 C. $Q + 7$ D. $Q \div 10$

4)

In	Out
63	9
35	5
49	7
14	2
42	6

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

- A. $Q \div 7$ B. $Q - 8$
 C. $Q - 2$ D. $Q - 7$

5)

In	Out
25	26
38	39
43	44
8	9
45	46

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

- A. $Q \div 1$ B. $Q + 1$
 C. $Q \cdot 5$ D. $Q \cdot 2$

6)

In	Out
64	66
90	92
59	61
54	56
94	96

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

- A. $Q - 2$ B. $Q + 4$
 C. $Q + 2$ D. $Q + 2$

7)

In	Out
34	27
89	82
86	79
99	92
75	68

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

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

8)

In	Out
8	80
9	90
3	30
4	40
6	60

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

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

9)

In	Out
89	77
13	1
88	76
52	40
111	99

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

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

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



Determine which number sentence best matches the function machine.

1)

In	Out
59	52
79	72
62	55
19	12
58	51

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

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

2)

In	Out
85	93
26	34
76	84
10	18
59	67

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

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

3)

In	Out
28	4
70	10
35	5
21	3
42	6

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

- A. $Q \div 7$ B. $Q \cdot 7$
 C. $Q + 7$ D. $Q \div 10$

4)

In	Out
63	9
35	5
49	7
14	2
42	6

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

- A. $Q \div 7$ B. $Q - 8$
 C. $Q - 2$ D. $Q - 7$

5)

In	Out
25	26
38	39
43	44
8	9
45	46

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

- A. $Q \div 1$ B. $Q + 1$
 C. $Q \cdot 5$ D. $Q \cdot 2$

6)

In	Out
64	66
90	92
59	61
54	56
94	96

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

- A. $Q - 2$ B. $Q + 4$
 C. $Q + 2$ D. $Q + 2$

7)

In	Out
34	27
89	82
86	79
99	92
75	68

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

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

8)

In	Out
8	80
9	90
3	30
4	40
6	60

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

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

9)

In	Out
89	77
13	1
88	76
52	40
111	99

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

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

Answers

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



Determine which number sentence best matches the function machine.

Answers

1)

In	Out
24	4
12	2
42	7
18	3
60	10

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

- A. $Q \div 6$ B. $Q - 7$
C. $Q - 6$ D. $Q \div 10$

2)

In	Out
49	7
35	5
63	9
28	4
56	8

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

- A. $Q - 7$ B. $Q \div 8$
C. $Q \div 7$ D. $Q - 6$

3)

In	Out
99	104
48	53
77	82
91	96
8	13

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

- A. $Q \cdot 7$ B. $Q + 5$
C. $Q \cdot 9$ D. $Q + 7$

4)

In	Out
1	19
79	97
12	30
6	24
45	63

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

- A. $Q + 18$ B. $Q \cdot 18$
C. $Q \div 18$ D. $Q + 3$

5)

In	Out
9	63
6	42
8	56
2	14
4	28

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

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

6)

In	Out
103	95
60	52
90	82
26	18
74	66

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

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

7)

In	Out
6	54
5	45
9	81
7	63
4	36

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

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

8)

In	Out
10	100
2	20
7	70
5	50
9	90

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

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

9)

In	Out
107	88
51	32
115	96
90	71
95	76

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

- A. $Q \div 7$ B. $Q - 3$
C. $Q - 6$ D. $Q - 19$

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



Determine which number sentence best matches the function machine.

1)

In	Out
24	4
12	2
42	7
18	3
60	10

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

- A. $Q \div 6$ B. $Q - 7$
 C. $Q - 6$ D. $Q \div 10$

2)

In	Out
49	7
35	5
63	9
28	4
56	8

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

- A. $Q - 7$ B. $Q \div 8$
 C. $Q \div 7$ D. $Q - 6$

3)

In	Out
99	104
48	53
77	82
91	96
8	13

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

- A. $Q \cdot 7$ B. $Q + 5$
 C. $Q \cdot 9$ D. $Q + 7$

4)

In	Out
1	19
79	97
12	30
6	24
45	63

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

- A. $Q + 18$ B. $Q \cdot 18$
 C. $Q \div 18$ D. $Q + 3$

5)

In	Out
9	63
6	42
8	56
2	14
4	28

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

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

6)

In	Out
103	95
60	52
90	82
26	18
74	66

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

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

7)

In	Out
6	54
5	45
9	81
7	63
4	36

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

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

8)

In	Out
10	100
2	20
7	70
5	50
9	90

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

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

9)

In	Out
107	88
51	32
115	96
90	71
95	76

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

- A. $Q \div 7$ B. $Q - 3$
 C. $Q - 6$ D. $Q - 19$

Answers

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