



## Function Machine - Determining Rule

Name: \_\_\_\_\_

Determine which number sentence best matches the function machine.

Answers

in	out
33	42
27	36
20	29
16	25
32	41

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

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

in	out
18	23
40	45
47	52
24	29
25	30

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

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

in	out
48	57
10	19
38	47
44	53
31	40

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

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

in	out
13	20
23	30
14	21
25	32
28	35

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

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

in	out
37	30
51	44
33	26
29	22
41	34

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

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

in	out
36	26
54	44
53	43
26	16
35	25

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

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

in	out
54	39
46	31
63	48
29	14
57	42

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

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

in	out
49	41
33	25
40	32
50	42
39	31

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

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

in	out
27	19
48	40
31	23
44	36
46	38

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

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



Determine which number sentence best matches the function machine.

in	out
33	42
27	36
20	29
16	25
32	41

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

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

in	out
18	23
40	45
47	52
24	29
25	30

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

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

in	out
48	57
10	19
38	47
44	53
31	40

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

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

in	out
13	20
23	30
14	21
25	32
28	35

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

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

in	out
37	30
51	44
33	26
29	22
41	34

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

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

in	out
36	26
54	44
53	43
26	16
35	25

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

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

in	out
54	39
46	31
63	48
29	14
57	42

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

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

in	out
49	41
33	25
40	32
50	42
39	31

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

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

in	out
27	19
48	40
31	23
44	36
46	38

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

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

### Answers

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



## Function Machine - Determining Rule

Name: \_\_\_\_\_

Determine which number sentence best matches the function machine.

Answers

in	out
27	13
24	10
60	46
57	43
46	32

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

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

in	out
28	22
18	12
40	34
25	19
54	48

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

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

in	out
42	53
49	60
38	49
24	35
45	56

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

- A.  $Q + 11$     B.  $Q - 11$   
 C.  $Q \times 11$     D.  $Q \div 11$

in	out
27	37
23	33
31	41
14	24
37	47

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

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

in	out
25	40
36	51
10	25
38	53
15	30

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

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

in	out
39	47
14	22
38	46
26	34
18	26

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

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

in	out
55	47
44	36
39	31
52	44
53	45

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

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

in	out
34	44
19	29
11	21
16	26
24	34

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

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

in	out
40	35
39	34
23	18
38	33
15	10

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

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



Determine which number sentence best matches the function machine.

in	out
27	13
24	10
60	46
57	43
46	32

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

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

in	out
28	22
18	12
40	34
25	19
54	48

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

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

in	out
42	53
49	60
38	49
24	35
45	56

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

- A.  $Q + 11$     B.  $Q - 11$   
C.  $Q \times 11$     D.  $Q \div 11$

in	out
27	37
23	33
31	41
14	24
37	47

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

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

in	out
25	40
36	51
10	25
38	53
15	30

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

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

in	out
39	47
14	22
38	46
26	34
18	26

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

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

in	out
55	47
44	36
39	31
52	44
53	45

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

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

in	out
34	44
19	29
11	21
16	26
24	34

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

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

in	out
40	35
39	34
23	18
38	33
15	10

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

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

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



## Function Machine - Determining Rule

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Answers

in	out
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23	28
47	52
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in	out
21	36
50	65
35	50
22	37
17	32

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

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

in	out
47	60
29	42
43	56
50	63
27	40

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

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

in	out
47	39
50	42
20	12
51	43
52	44

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

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

in	out
59	46
31	18
63	50
25	12
37	24

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

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

in	out
27	12
39	24
34	19
62	47
65	50

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

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

in	out
14	23
10	19
31	40
18	27
26	35

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

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

in	out
51	46
48	43
33	28
24	19
54	49

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

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

in	out
48	55
27	34
34	41
10	17
18	25

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

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



Determine which number sentence best matches the function machine.

in	out
39	44
23	28
47	52
17	22
24	29

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

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

in	out
21	36
50	65
35	50
22	37
17	32

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

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

in	out
47	60
29	42
43	56
50	63
27	40

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

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

in	out
47	39
50	42
20	12
51	43
52	44

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

- A.  $Q + 8$     B.  $Q - 8$   
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in	out
59	46
31	18
63	50
25	12
37	24

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

- A.  $Q + 13$     B.  $Q - 13$   
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in	out
27	12
39	24
34	19
62	47
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If each input is 'Q' which rule could the function machine be using?

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

in	out
14	23
10	19
31	40
18	27
26	35

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

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

in	out
51	46
48	43
33	28
24	19
54	49

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

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

in	out
48	55
27	34
34	41
10	17
18	25

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

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

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



## Function Machine - Determining Rule

Name: \_\_\_\_\_

Determine which number sentence best matches the function machine.

Answers

in	out
17	26
29	38
33	42
13	22
45	54

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

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

in	out
29	15
32	18
25	11
36	22
47	33

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

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

in	out
20	14
24	18
46	40
43	37
22	16

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

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

in	out
19	31
43	55
40	52
33	45
48	60

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

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

in	out
20	35
17	32
18	33
32	47
37	52

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

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

in	out
29	22
20	13
52	45
57	50
30	23

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

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

in	out
40	30
28	18
39	29
52	42
25	15

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

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

in	out
22	28
35	41
31	37
13	19
23	29

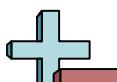
If each input is 'Q' which rule could the function machine be using?

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

in	out
46	33
25	12
29	16
40	27
51	38

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

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



# Function Machine - Determining Rule

Name: **Answer Key**

Determine which number sentence best matches the function machine.

in	out
17	26
29	38
33	42
13	22
45	54

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

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

in	out
29	15
32	18
25	11
36	22
47	33

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

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

in	out
20	14
24	18
46	40
43	37
22	16

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

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

in	out
19	31
43	55
40	52
33	45
48	60

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

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

in	out
20	35
17	32
18	33
32	47
37	52

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

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

in	out
29	22
20	13
52	45
57	50
30	23

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

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

in	out
40	30
28	18
39	29
52	42
25	15

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

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

in	out
22	28
35	41
31	37
13	19
23	29

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

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

in	out
46	33
25	12
29	16
40	27
51	38

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

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

**Answers**

1. **A**

2. **B**

3. **B**

4. **A**

5. **A**

6. **B**

7. **B**

8. **A**

9. **B**



## Function Machine - Determining Rule

Name: \_\_\_\_\_

Determine which number sentence best matches the function machine.

Answers

in	out
47	33
64	50
33	19
37	23
40	26

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

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

in	out
42	57
40	55
16	31
24	39
33	48

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

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

in	out
14	25
37	48
43	54
35	46
19	30

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

- A.  $Q + 11$     B.  $Q - 11$   
 C.  $Q \times 11$     D.  $Q \div 11$

in	out
47	54
12	19
48	55
14	21
21	28

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

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

in	out
42	35
57	50
47	40
39	32
55	48

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

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

in	out
28	41
39	52
30	43
43	56
18	31

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

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

in	out
27	15
29	17
44	32
46	34
30	18

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

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

in	out
47	42
17	12
40	35
19	14
45	40

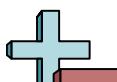
If each input is 'Q' which rule could the function machine be using?

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

in	out
53	47
19	13
40	34
33	27
26	20

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

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



Determine which number sentence best matches the function machine.

in	out
47	33
64	50
33	19
37	23
40	26

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

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

in	out
42	57
40	55
16	31
24	39
33	48

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

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

in	out
14	25
37	48
43	54
35	46
19	30

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

- A.  $Q + 11$     B.  $Q - 11$   
C.  $Q \times 11$     D.  $Q \div 11$

in	out
47	54
12	19
48	55
14	21
21	28

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

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

in	out
42	35
57	50
47	40
39	32
55	48

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

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

in	out
28	41
39	52
30	43
43	56
18	31

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

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

in	out
27	15
29	17
44	32
46	34
30	18

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

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

in	out
47	42
17	12
40	35
19	14
45	40

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

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

in	out
53	47
19	13
40	34
33	27
26	20

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

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

### Answers

1. **B**

2. **A**

3. **A**

4. **A**

5. **B**

6. **A**

7. **B**

8. **B**

9. **B**



## Function Machine - Determining Rule

Name: \_\_\_\_\_

Determine which number sentence best matches the function machine.

Answers

in	out
50	41
51	42
42	33
44	35
59	50

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

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

in	out
30	22
52	44
25	17
29	21
43	35

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

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

in	out
25	34
42	51
50	59
36	45
17	26

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

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

in	out
54	40
36	22
50	36
37	23
25	11

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

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

in	out
31	38
35	42
12	19
28	35
50	57

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

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

in	out
49	54
12	17
16	21
30	35
25	30

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

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

in	out
25	11
28	14
34	20
45	31
58	44

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

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

in	out
32	44
43	55
48	60
47	59
26	38

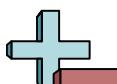
If each input is 'Q' which rule could the function machine be using?

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

in	out
25	12
60	47
26	13
57	44
61	48

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

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



Determine which number sentence best matches the function machine.

in	out
50	41
51	42
42	33
44	35
59	50

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

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

in	out
30	22
52	44
25	17
29	21
43	35

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

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

in	out
25	34
42	51
50	59
36	45
17	26

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

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

in	out
54	40
36	22
50	36
37	23
25	11

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

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

in	out
31	38
35	42
12	19
28	35
50	57

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

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

in	out
49	54
12	17
16	21
30	35
25	30

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

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

in	out
25	11
28	14
34	20
45	31
58	44

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

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

in	out
32	44
43	55
48	60
47	59
26	38

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

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

in	out
25	12
60	47
26	13
57	44
61	48

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

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

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



## Function Machine - Determining Rule

Name: \_\_\_\_\_

Determine which number sentence best matches the function machine.

Answers

in	out
50	36
26	12
59	45
27	13
46	32

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

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

in	out
47	35
39	27
53	41
41	29
33	21

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

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

in	out
45	55
14	24
21	31
33	43
39	49

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

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

in	out
26	33
46	53
12	19
40	47
20	27

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

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

in	out
27	15
57	45
31	19
54	42
47	35

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

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

in	out
33	42
31	40
15	24
46	55
25	34

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

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

in	out
23	14
20	11
38	29
57	48
55	46

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

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

in	out
54	40
51	37
24	10
64	50
33	19

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

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

in	out
22	12
49	39
43	33
34	24
40	30

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

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



# Function Machine - Determining Rule

Name: **Answer Key**

Determine which number sentence best matches the function machine.

in	out
50	36
26	12
59	45
27	13
46	32

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

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

in	out
47	35
39	27
53	41
41	29
33	21

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

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

in	out
45	55
14	24
21	31
33	43
39	49

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

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

in	out
26	33
46	53
12	19
40	47
20	27

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

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

in	out
27	15
57	45
31	19
54	42
47	35

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

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

in	out
33	42
31	40
15	24
46	55
25	34

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

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

in	out
23	14
20	11
38	29
57	48
55	46

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

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

in	out
54	40
51	37
24	10
64	50
33	19

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

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

in	out
22	12
49	39
43	33
34	24
40	30

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

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

**Answers**

1. **B**

2. **B**

3. **A**

4. **A**

5. **B**

6. **A**

7. **B**

8. **B**

9. **B**



## Function Machine - Determining Rule

Name: \_\_\_\_\_

Determine which number sentence best matches the function machine.

Answers

in	out
16	24
33	41
47	55
31	39
14	22

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

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

in	out
17	32
29	44
36	51
42	57
48	63

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

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

in	out
48	39
35	26
22	13
25	16
34	25

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

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

in	out
39	51
25	37
31	43
27	39
40	52

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

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

in	out
40	47
45	52
33	40
16	23
47	54

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

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

in	out
34	28
25	19
47	41
46	40
43	37

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

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

in	out
36	47
19	30
17	28
37	48
33	44

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

- A.  $Q + 11$     B.  $Q - 11$   
C.  $Q \times 11$     D.  $Q \div 11$

in	out
52	44
36	28
32	24
24	16
51	43

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

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

in	out
55	50
43	38
23	18
31	26
50	45

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

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



Determine which number sentence best matches the function machine.

in	out
16	24
33	41
47	55
31	39
14	22

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

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

in	out
17	32
29	44
36	51
42	57
48	63

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

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

in	out
48	39
35	26
22	13
25	16
34	25

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

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

in	out
39	51
25	37
31	43
27	39
40	52

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

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

in	out
40	47
45	52
33	40
16	23
47	54

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

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

in	out
34	28
25	19
47	41
46	40
43	37

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

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

in	out
36	47
19	30
17	28
37	48
33	44

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

- A.  $Q + 11$     B.  $Q - 11$   
C.  $Q \times 11$     D.  $Q \div 11$

in	out
52	44
36	28
32	24
24	16
51	43

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

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

in	out
55	50
43	38
23	18
31	26
50	45

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

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

### Answers

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



## Function Machine - Determining Rule

Name: \_\_\_\_\_

Determine which number sentence best matches the function machine.

Answers

in	out
33	45
12	24
42	54
41	53
25	37

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

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

in	out
52	42
57	47
35	25
48	38
47	37

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

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

in	out
20	29
21	30
43	52
42	51
23	32

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

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

in	out
25	11
31	17
60	46
45	31
39	25

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

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

in	out
20	28
45	53
40	48
39	47
34	42

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

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

in	out
31	40
11	20
14	23
49	58
32	41

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

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

in	out
48	62
30	44
17	31
43	57
16	30

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

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

in	out
28	18
22	12
48	38
54	44
39	29

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

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

in	out
50	42
57	49
23	15
45	37
43	35

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

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



Determine which number sentence best matches the function machine.

in	out
33	45
12	24
42	54
41	53
25	37

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

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

in	out
52	42
57	47
35	25
48	38
47	37

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

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

in	out
20	29
21	30
43	52
42	51
23	32

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

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

in	out
25	11
31	17
60	46
45	31
39	25

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

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

in	out
20	28
45	53
40	48
39	47
34	42

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

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

in	out
31	40
11	20
14	23
49	58
32	41

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

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

in	out
48	62
30	44
17	31
43	57
16	30

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

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

in	out
28	18
22	12
48	38
54	44
39	29

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

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

in	out
50	42
57	49
23	15
45	37
43	35

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

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

**Answers**

1. **A**

2. **B**

3. **A**

4. **B**

5. **A**

6. **A**

7. **A**

8. **B**

9. **B**



## Function Machine - Determining Rule

Name: \_\_\_\_\_

Determine which number sentence best matches the function machine.

Answers

in	out
32	22
29	19
43	33
37	27
23	13

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

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

in	out
56	42
27	13
36	22
42	28
53	39

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

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

in	out
38	48
33	43
19	29
43	53
16	26

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

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

in	out
30	45
13	28
15	30
38	53
20	35

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

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

in	out
45	31
40	26
52	38
26	12
57	43

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

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

in	out
10	24
11	25
43	57
12	26
31	45

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

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

in	out
21	32
32	43
31	42
27	38
45	56

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

- A.  $Q + 11$     B.  $Q - 11$   
 C.  $Q \times 11$     D.  $Q \div 11$

in	out
45	50
43	48
30	35
48	53
13	18

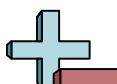
If each input is 'Q' which rule could the function machine be using?

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

in	out
32	26
54	48
40	34
25	19
30	24

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

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



Determine which number sentence best matches the function machine.

in	out
32	22
29	19
43	33
37	27
23	13

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

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

in	out
56	42
27	13
36	22
42	28
53	39

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

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

in	out
38	48
33	43
19	29
43	53
16	26

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

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

in	out
30	45
13	28
15	30
38	53
20	35

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

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

in	out
45	31
40	26
52	38
26	12
57	43

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

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 C.  $Q \times 14$     D.  $Q \div 14$

in	out
10	24
11	25
43	57
12	26
31	45

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

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in	out
21	32
32	43
31	42
27	38
45	56

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

- A.  $Q + 11$     B.  $Q - 11$   
 C.  $Q \times 11$     D.  $Q \div 11$

in	out
45	50
43	48
30	35
48	53
13	18

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

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

in	out
32	26
54	48
40	34
25	19
30	24

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

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

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