



Determine which rule best represents the expression the function machine used.

Answers

1)

Input (K)	7	5	3	9	8
Output	65	45	25	85	75

- A. $K \times 10 - 5$ B. $K \times 5$
 C. $K \times 9 - 5$ D. $K \times 10$

1. _____

2)

Input (U)	8	7	2	4	6
Output	57	49	9	25	41

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

2. _____

3)

Input (J)	8	10	5	6	2
Output	34	42	22	26	10

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

3. _____

4)

Input (M)	17	14	15	19	12
Output	8	5	6	10	3

- A. $M \times 14 + 10$ B. $M - 9$
 C. $M \times 8 - 10$ D. $M \times 9 + 12$

4. _____

5)

Input (S)	9	11	14	8	13
Output	3	5	8	2	7

- A. $S \times 5 - 5$ B. $S \times 6 + 6$
 C. $S - 6$ D. $S \times 9 + 5$

5. _____

6)

Input (G)	3	4	9	5	10
Output	18	24	54	30	60

- A. $G \times 6 - 6$ B. $G \times 6$
 C. $G \times 9 - 3$ D. $G \times 3$

6. _____

7)

Input (N)	10	4	2	8	9
Output	90	36	18	72	81

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

7. _____

8)

Input (T)	5	6	7	4	3
Output	17	20	23	14	11

- A. $T \times 3 + 1$ B. $T \times 3$
 C. $T \times 3 + 2$ D. $T \times 4 - 2$

8. _____

9)

Input (Z)	4	2	9	8	10
Output	12	10	17	16	18

- A. $Z + 6$ B. $Z \times 8 - 9$
 C. $Z + 8$ D. $Z \times 12 + 6$

9. _____

10)

Input (V)	2	4	10	3	6
Output	8	16	40	12	24

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

10. _____



Determine which rule best represents the expression the function machine used.

1)

Input (K)	7	5	3	9	8
Output	65	45	25	85	75

- A. $K \times 10 - 5$ B. $K \times 5$
 C. $K \times 9 - 5$ D. $K \times 10$

2)

Input (U)	8	7	2	4	6
Output	57	49	9	25	41

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

3)

Input (J)	8	10	5	6	2
Output	34	42	22	26	10

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

4)

Input (M)	17	14	15	19	12
Output	8	5	6	10	3

- A. $M \times 14 + 10$ B. $M - 9$
 C. $M \times 8 - 10$ D. $M \times 9 + 12$

5)

Input (S)	9	11	14	8	13
Output	3	5	8	2	7

- A. $S \times 5 - 5$ B. $S \times 6 + 6$
 C. $S - 6$ D. $S \times 9 + 5$

6)

Input (G)	3	4	9	5	10
Output	18	24	54	30	60

- A. $G \times 6 - 6$ B. $G \times 6$
 C. $G \times 9 - 3$ D. $G \times 3$

7)

Input (N)	10	4	2	8	9
Output	90	36	18	72	81

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

8)

Input (T)	5	6	7	4	3
Output	17	20	23	14	11

- A. $T \times 3 + 1$ B. $T \times 3$
 C. $T \times 3 + 2$ D. $T \times 4 - 2$

9)

Input (Z)	4	2	9	8	10
Output	12	10	17	16	18

- A. $Z + 6$ B. $Z \times 8 - 9$
 C. $Z + 8$ D. $Z \times 12 + 6$

10)

Input (V)	2	4	10	3	6
Output	8	16	40	12	24

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

Answers

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



Determine which rule best represents the expression the function machine used.

Answers

1)

Input (S)	2	6	3	9	4
Output	4	12	6	18	8

A. $S + 9$ B. $S \times 2 + 12$
C. $S \times 2 - 11$ D. $S \times 2$

1. _____

2)

Input (J)	7	9	2	4	6
Output	13	15	8	10	12

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

2. _____

3)

Input (P)	8	5	3	10	4
Output	57	33	17	73	25

A. $P \times 8 - 7$ B. $P + 7$
C. $P \times 8 - 9$ D. $P \times 10 - 7$

3. _____

4)

Input (F)	8	10	6	4	2
Output	48	60	36	24	12

A. $F \times 6 - 9$ B. $F \times 6$
C. $F \times 6 + 9$ D. $F + 10$

4. _____

5)

Input (V)	5	9	8	2	3
Output	12	16	15	9	10

A. $V \times 11 + 4$ B. $V \times 7 + 6$
C. $V + 7$ D. $V \times 10 - 4$

5. _____

6)

Input (W)	2	3	10	6	5
Output	19	25	67	43	37

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

6. _____

7)

Input (H)	5	3	2	9	4
Output	40	24	16	72	32

A. $H + 3$ B. $H \times 8$
C. $H \times 12 + 3$ D. $H + 8$

7. _____

8)

Input (U)	2	7	6	4	8
Output	12	52	44	28	60

A. $U \times 4$ B. $U \times 8 - 4$
C. $U \times 11 - 4$ D. $U \times 10 + 4$

8. _____

9)

Input (M)	7	8	4	9	5
Output	49	56	28	63	35

A. $M \times 5$ B. $M \times 8 - 5$
C. $M \times 9 + 5$ D. $M \times 7$

9. _____

10)

Input (Q)	5	6	8	3	9
Output	35	42	56	21	63

A. $Q \times 10 + 5$ B. $Q \times 7 - 6$
C. $Q \times 8 - 5$ D. $Q \times 7$

10. _____



Determine which rule best represents the expression the function machine used.

1)

Input (S)	2	6	3	9	4
Output	4	12	6	18	8

A. $S + 9$ B. $S \times 2 + 12$
C. $S \times 2 - 11$ D. $S \times 2$

2)

Input (J)	7	9	2	4	6
Output	13	15	8	10	12

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

3)

Input (P)	8	5	3	10	4
Output	57	33	17	73	25

A. $P \times 8 - 7$ B. $P + 7$
C. $P \times 8 - 9$ D. $P \times 10 - 7$

4)

Input (F)	8	10	6	4	2
Output	48	60	36	24	12

A. $F \times 6 - 9$ B. $F \times 6$
C. $F \times 6 + 9$ D. $F + 10$

5)

Input (V)	5	9	8	2	3
Output	12	16	15	9	10

A. $V \times 11 + 4$ B. $V \times 7 + 6$
C. $V + 7$ D. $V \times 10 - 4$

6)

Input (W)	2	3	10	6	5
Output	19	25	67	43	37

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

7)

Input (H)	5	3	2	9	4
Output	40	24	16	72	32

A. $H + 3$ B. $H \times 8$
C. $H \times 12 + 3$ D. $H + 8$

8)

Input (U)	2	7	6	4	8
Output	12	52	44	28	60

A. $U \times 4$ B. $U \times 8 - 4$
C. $U \times 11 - 4$ D. $U \times 10 + 4$

9)

Input (M)	7	8	4	9	5
Output	49	56	28	63	35

A. $M \times 5$ B. $M \times 8 - 5$
C. $M \times 9 + 5$ D. $M \times 7$

10)

Input (Q)	5	6	8	3	9
Output	35	42	56	21	63

A. $Q \times 10 + 5$ B. $Q \times 7 - 6$
C. $Q \times 8 - 5$ D. $Q \times 7$

Answers

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



Determine which rule best represents the expression the function machine used.

Answers

- 1)

Input (F)	15	13	12	9	7
Output	10	8	7	4	2

 A. $F \times 8 - 9$ B. $F \times 5 - 12$
C. $F \times 8 + 9$ D. $F - 5$
- 2)

Input (H)	5	6	7	10	2
Output	15	17	19	25	9

 A. $H + 2$ B. $H \times 5 - 5$
C. $H \times 2$ D. $H \times 2 + 5$
- 3)

Input (T)	17	11	9	13	10
Output	10	4	2	6	3

 A. $T + 8$ B. $T \times 8$
C. $T - 7$ D. $T \times 9 - 8$
- 4)

Input (N)	10	3	8	4	6
Output	17	10	15	11	13

 A. $N + 7$ B. $N \times 7$
C. $N \times 10$ D. $N \times 11 + 10$
- 5)

Input (W)	9	4	10	3	6
Output	72	37	79	30	51

 A. $W \times 9$ B. $W \times 7 + 9$
C. $W \times 7 - 11$ D. $W \times 11 + 9$
- 6)

Input (M)	9	10	7	2	5
Output	88	98	68	18	48

 A. $M \times 10 - 1$ B. $M \times 10 - 2$
C. $M \times 12 - 2$ D. $M \times 10$
- 7)

Input (V)	6	4	7	5	3
Output	32	20	38	26	14

 A. $V \times 8 + 4$ B. $V + 4$
C. $V \times 6 - 4$ D. $V \times 6 - 7$
- 8)

Input (S)	10	8	5	9	2
Output	51	39	21	45	3

 A. $S \times 10 + 9$ B. $S \times 6 - 12$
C. $S \times 7 - 9$ D. $S \times 6 - 9$
- 9)

Input (K)	5	8	3	7	4
Output	10	13	8	12	9

 A. $K + 5$ B. $K \times 4 - 2$
C. $K \times 5 + 4$ D. $K \times 5 - 4$
- 10)

Input (Q)	6	10	8	2	5
Output	9	13	11	5	8

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

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



Determine which rule best represents the expression the function machine used.

1)

Input (F)	15	13	12	9	7
Output	10	8	7	4	2

 A. $F \times 8 - 9$ B. $F \times 5 - 12$
 C. $F \times 8 + 9$ D. $F - 5$

2)

Input (H)	5	6	7	10	2
Output	15	17	19	25	9

 A. $H + 2$ B. $H \times 5 - 5$
 C. $H \times 2$ D. $H \times 2 + 5$

3)

Input (T)	17	11	9	13	10
Output	10	4	2	6	3

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

4)

Input (N)	10	3	8	4	6
Output	17	10	15	11	13

 A. $N + 7$ B. $N \times 7$
 C. $N \times 10$ D. $N \times 11 + 10$

5)

Input (W)	9	4	10	3	6
Output	72	37	79	30	51

 A. $W \times 9$ B. $W \times 7 + 9$
 C. $W \times 7 - 11$ D. $W \times 11 + 9$

6)

Input (M)	9	10	7	2	5
Output	88	98	68	18	48

 A. $M \times 10 - 1$ B. $M \times 10 - 2$
 C. $M \times 12 - 2$ D. $M \times 10$

7)

Input (V)	6	4	7	5	3
Output	32	20	38	26	14

 A. $V \times 8 + 4$ B. $V + 4$
 C. $V \times 6 - 4$ D. $V \times 6 - 7$

8)

Input (S)	10	8	5	9	2
Output	51	39	21	45	3

 A. $S \times 10 + 9$ B. $S \times 6 - 12$
 C. $S \times 7 - 9$ D. $S \times 6 - 9$

9)

Input (K)	5	8	3	7	4
Output	10	13	8	12	9

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

10)

Input (Q)	6	10	8	2	5
Output	9	13	11	5	8

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

Answers

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



Determine which rule best represents the expression the function machine used.

Answers

1)

Input (P)	5	6	10	2	4
Output	33	41	73	9	25

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

1. _____

2)

Input (V)	16	12	10	13	11
Output	10	6	4	7	5

- A. $V \times 6$ B. $V - 6$
 C. $V \times 8 - 3$ D. $V + 3$

2. _____

3)

Input (M)	16	13	9	15	12
Output	9	6	2	8	5

- A. $M \times 7 + 11$ B. $M \times 8$
 C. $M - 7$ D. $M \times 7 - 10$

3. _____

4)

Input (Z)	16	12	15	20	18
Output	6	2	5	10	8

- A. $Z - 10$ B. $Z \times 10 + 3$
 C. $Z \times 12 - 2$ D. $Z \times 14 + 2$

4. _____

5)

Input (U)	10	4	2	9	6
Output	13	7	5	12	9

- A. $U \times 3 + 4$ B. $U \times 3 - 8$
 C. $U \times 5$ D. $U + 3$

5. _____

6)

Input (N)	6	7	3	10	8
Output	14	15	11	18	16

- A. $N + 8$ B. $N \times 12 + 2$
 C. $N \times 11 - 2$ D. $N \times 8 - 4$

6. _____

7)

Input (J)	7	8	2	3	10
Output	21	23	11	13	27

- A. $J \times 4 + 7$ B. $J \times 2 + 7$
 C. $J \times 7$ D. $J \times 2 + 8$

7. _____

8)

Input (R)	5	3	10	8	6
Output	53	33	103	83	63

- A. $R \times 10$ B. $R \times 3$
 C. $R \times 10 + 3$ D. $R \times 10 + 2$

8. _____

9)

Input (F)	9	10	8	4	6
Output	63	70	56	28	42

- A. $F \times 7$ B. $F + 9$
 C. $F \times 7 + 12$ D. $F \times 9 + 9$

9. _____

10)

Input (Y)	3	6	8	2	9
Output	11	32	46	4	53

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

10. _____



Determine which rule best represents the expression the function machine used.

1)

Input (P)	5	6	10	2	4
Output	33	41	73	9	25

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

2)

Input (V)	16	12	10	13	11
Output	10	6	4	7	5

- A. $V \times 6$ B. $V - 6$
 C. $V \times 8 - 3$ D. $V + 3$

3)

Input (M)	16	13	9	15	12
Output	9	6	2	8	5

- A. $M \times 7 + 11$ B. $M \times 8$
 C. $M - 7$ D. $M \times 7 - 10$

4)

Input (Z)	16	12	15	20	18
Output	6	2	5	10	8

- A. $Z - 10$ B. $Z \times 10 + 3$
 C. $Z \times 12 - 2$ D. $Z \times 14 + 2$

5)

Input (U)	10	4	2	9	6
Output	13	7	5	12	9

- A. $U \times 3 + 4$ B. $U \times 3 - 8$
 C. $U \times 5$ D. $U + 3$

6)

Input (N)	6	7	3	10	8
Output	14	15	11	18	16

- A. $N + 8$ B. $N \times 12 + 2$
 C. $N \times 11 - 2$ D. $N \times 8 - 4$

7)

Input (J)	7	8	2	3	10
Output	21	23	11	13	27

- A. $J \times 4 + 7$ B. $J \times 2 + 7$
 C. $J \times 7$ D. $J \times 2 + 8$

8)

Input (R)	5	3	10	8	6
Output	53	33	103	83	63

- A. $R \times 10$ B. $R \times 3$
 C. $R \times 10 + 3$ D. $R \times 10 + 2$

9)

Input (F)	9	10	8	4	6
Output	63	70	56	28	42

- A. $F \times 7$ B. $F + 9$
 C. $F \times 7 + 12$ D. $F \times 9 + 9$

10)

Input (Y)	3	6	8	2	9
Output	11	32	46	4	53

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

Answers

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



Determine which rule best represents the expression the function machine used.

Answers

1)

Input (P)	14	12	9	11	10
Output	8	6	3	5	4

- A. $P \times 6$ B. $P \times 6 + 8$
 C. $P - 6$ D. $P \times 5$

1. _____

2)

Input (U)	9	7	5	3	2
Output	72	58	44	30	23

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

2. _____

3)

Input (H)	7	10	5	3	4
Output	66	96	46	26	36

- A. $H \times 10 - 4$ B. $H + 4$
 C. $H \times 12 + 4$ D. $H \times 4$

3. _____

4)

Input (L)	7	4	3	5	2
Output	38	20	14	26	8

- A. $L \times 5 - 4$ B. $L \times 6$
 C. $L \times 6 + 5$ D. $L \times 6 - 4$

4. _____

5)

Input (V)	4	5	6	9	8
Output	36	45	54	81	72

- A. $V + 9$ B. $V \times 9$
 C. $V \times 4$ D. $V \times 8 - 4$

5. _____

6)

Input (K)	5	9	8	7	4
Output	48	84	75	66	39

- A. $K \times 9 - 6$ B. $K \times 11 - 3$
 C. $K \times 9 + 3$ D. $K \times 9 + 2$

6. _____

7)

Input (M)	2	7	6	5	9
Output	18	63	54	45	81

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

7. _____

8)

Input (Y)	15	13	11	10	16
Output	7	5	3	2	8

- A. $Y \times 8$ B. $Y \times 8 - 5$
 C. $Y + 4$ D. $Y - 8$

8. _____

9)

Input (S)	10	7	4	9	5
Output	16	13	10	15	11

- A. $S \times 6 - 2$ B. $S \times 6$
 C. $S \times 9 + 3$ D. $S + 6$

9. _____

10)

Input (G)	3	7	6	10	8
Output	15	35	30	50	40

- A. $G \times 5$ B. $G \times 10 + 3$
 C. $G + 3$ D. $G \times 6 - 3$

10. _____



Determine which rule best represents the expression the function machine used.

1)

Input (P)	14	12	9	11	10
Output	8	6	3	5	4

- A. $P \times 6$ B. $P \times 6 + 8$
 C. $P - 6$ D. $P \times 5$

2)

Input (U)	9	7	5	3	2
Output	72	58	44	30	23

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

3)

Input (H)	7	10	5	3	4
Output	66	96	46	26	36

- A. $H \times 10 - 4$ B. $H + 4$
 C. $H \times 12 + 4$ D. $H \times 4$

4)

Input (L)	7	4	3	5	2
Output	38	20	14	26	8

- A. $L \times 5 - 4$ B. $L \times 6$
 C. $L \times 6 + 5$ D. $L \times 6 - 4$

5)

Input (V)	4	5	6	9	8
Output	36	45	54	81	72

- A. $V + 9$ B. $V \times 9$
 C. $V \times 4$ D. $V \times 8 - 4$

6)

Input (K)	5	9	8	7	4
Output	48	84	75	66	39

- A. $K \times 9 - 6$ B. $K \times 11 - 3$
 C. $K \times 9 + 3$ D. $K \times 9 + 2$

7)

Input (M)	2	7	6	5	9
Output	18	63	54	45	81

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

8)

Input (Y)	15	13	11	10	16
Output	7	5	3	2	8

- A. $Y \times 8$ B. $Y \times 8 - 5$
 C. $Y + 4$ D. $Y - 8$

9)

Input (S)	10	7	4	9	5
Output	16	13	10	15	11

- A. $S \times 6 - 2$ B. $S \times 6$
 C. $S \times 9 + 3$ D. $S + 6$

10)

Input (G)	3	7	6	10	8
Output	15	35	30	50	40

- A. $G \times 5$ B. $G \times 10 + 3$
 C. $G + 3$ D. $G \times 6 - 3$

Answers

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



Determine which rule best represents the expression the function machine used.

Answers

1)

Input (Y)	12	15	17	16	9
Output	5	8	10	9	2

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

1. _____

2)

Input (Q)	9	5	8	2	6
Output	39	19	34	4	24

- A. $Q \times 5 + 7$ B. $Q \times 8 + 6$
 C. $Q \times 5 - 6$ D. $Q \times 6 - 6$

2. _____

3)

Input (V)	8	9	2	10	6
Output	16	17	10	18	14

- A. $V + 8$ B. $V \times 8$
 C. $V \times 12 + 6$ D. $V + 6$

3. _____

4)

Input (W)	19	11	14	13	12
Output	10	2	5	4	3

- A. $W \times 9 - 8$ B. $W - 9$
 C. $W \times 9$ D. $W \times 7$

4. _____

5)

Input (T)	7	10	9	3	2
Output	14	17	16	10	9

- A. $T \times 10 + 2$ B. $T \times 2$
 C. $T \times 10 - 2$ D. $T + 7$

5. _____

6)

Input (F)	9	6	3	4	2
Output	60	39	18	25	11

- A. $F \times 7$ B. $F \times 3$
 C. $F \times 7 - 3$ D. $F \times 9 + 3$

6. _____

7)

Input (N)	5	3	9	4	10
Output	15	9	27	12	30

- A. $N \times 3 - 11$ B. $N \times 6 + 8$
 C. $N \times 3$ D. $N \times 8$

7. _____

8)

Input (U)	7	8	15	11	12
Output	2	3	10	6	7

- A. $U \times 8 + 10$ B. $U \times 5 + 13$
 C. $U - 5$ D. $U \times 5 - 12$

8. _____

9)

Input (K)	11	14	10	18	13
Output	3	6	2	10	5

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

9. _____

10)

Input (H)	12	17	10	11	15
Output	5	10	3	4	8

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

10. _____



Determine which rule best represents the expression the function machine used.

1)

Input (Y)	12	15	17	16	9
Output	5	8	10	9	2

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

2)

Input (Q)	9	5	8	2	6
Output	39	19	34	4	24

- A. $Q \times 5 + 7$ B. $Q \times 8 + 6$
 C. $Q \times 5 - 6$ D. $Q \times 6 - 6$

3)

Input (V)	8	9	2	10	6
Output	16	17	10	18	14

- A. $V + 8$ B. $V \times 8$
 C. $V \times 12 + 6$ D. $V + 6$

4)

Input (W)	19	11	14	13	12
Output	10	2	5	4	3

- A. $W \times 9 - 8$ B. $W - 9$
 C. $W \times 9$ D. $W \times 7$

5)

Input (T)	7	10	9	3	2
Output	14	17	16	10	9

- A. $T \times 10 + 2$ B. $T \times 2$
 C. $T \times 10 - 2$ D. $T + 7$

6)

Input (F)	9	6	3	4	2
Output	60	39	18	25	11

- A. $F \times 7$ B. $F \times 3$
 C. $F \times 7 - 3$ D. $F \times 9 + 3$

7)

Input (N)	5	3	9	4	10
Output	15	9	27	12	30

- A. $N \times 3 - 11$ B. $N \times 6 + 8$
 C. $N \times 3$ D. $N \times 8$

8)

Input (U)	7	8	15	11	12
Output	2	3	10	6	7

- A. $U \times 8 + 10$ B. $U \times 5 + 13$
 C. $U - 5$ D. $U \times 5 - 12$

9)

Input (K)	11	14	10	18	13
Output	3	6	2	10	5

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

10)

Input (H)	12	17	10	11	15
Output	5	10	3	4	8

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

Answers

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



Determine which rule best represents the expression the function machine used.

Answers

1)

Input (V)	9	3	10	2	4
Output	15	9	16	8	10

A. $V \times 6 - 2$
B. $V \times 6 + 6$
C. $V \times 7 - 3$
D. $V + 6$

1. _____

2)

Input (H)	10	5	8	7	9
Output	40	20	32	28	36

A. $H + 9$
B. $H \times 4 + 10$
C. $H \times 8 + 9$
D. $H \times 4$

2. _____

3)

Input (Y)	7	10	3	6	9
Output	27	36	15	24	33

A. $Y \times 8 + 6$
B. $Y \times 4 - 6$
C. $Y + 3$
D. $Y \times 3 + 6$

3. _____

4)

Input (L)	10	8	6	2	9
Output	90	74	58	26	82

A. $L \times 10$
B. $L \times 8 + 10$
C. $L + 8$
D. $L \times 13 + 10$

4. _____

5)

Input (M)	9	10	8	3	7
Output	45	49	41	21	37

A. $M \times 8 + 9$
B. $M \times 4$
C. $M \times 4 + 9$
D. $M \times 6 - 9$

5. _____

6)

Input (T)	7	2	9	5	4
Output	70	20	90	50	40

A. $T + 5$
B. $T \times 5$
C. $T \times 10$
D. $T \times 10 + 7$

6. _____

7)

Input (U)	7	10	8	2	6
Output	22	28	24	12	20

A. $U + 8$
B. $U + 2$
C. $U \times 8$
D. $U \times 2 + 8$

7. _____

8)

Input (Q)	7	10	2	4	5
Output	51	69	21	33	39

A. $Q \times 9 + 9$
B. $Q \times 6 - 12$
C. $Q + 6$
D. $Q \times 6 + 9$

8. _____

9)

Input (Z)	15	13	17	14	12
Output	8	6	10	7	5

A. $Z \times 7 - 6$
B. $Z + 3$
C. $Z \times 7 + 5$
D. $Z - 7$

9. _____

10)

Input (G)	10	6	3	8	7
Output	65	37	16	51	44

A. $G \times 7 - 7$
B. $G \times 7 - 5$
C. $G + 5$
D. $G \times 7$

10. _____



Determine which rule best represents the expression the function machine used.

1)

Input (V)	9	3	10	2	4
Output	15	9	16	8	10

- A. $V \times 6 - 2$ B. $V \times 6 + 6$
 C. $V \times 7 - 3$ D. $V + 6$

2)

Input (H)	10	5	8	7	9
Output	40	20	32	28	36

- A. $H + 9$ B. $H \times 4 + 10$
 C. $H \times 8 + 9$ D. $H \times 4$

3)

Input (Y)	7	10	3	6	9
Output	27	36	15	24	33

- A. $Y \times 8 + 6$ B. $Y \times 4 - 6$
 C. $Y + 3$ D. $Y \times 3 + 6$

4)

Input (L)	10	8	6	2	9
Output	90	74	58	26	82

- A. $L \times 10$ B. $L \times 8 + 10$
 C. $L + 8$ D. $L \times 13 + 10$

5)

Input (M)	9	10	8	3	7
Output	45	49	41	21	37

- A. $M \times 8 + 9$ B. $M \times 4$
 C. $M \times 4 + 9$ D. $M \times 6 - 9$

6)

Input (T)	7	2	9	5	4
Output	70	20	90	50	40

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

7)

Input (U)	7	10	8	2	6
Output	22	28	24	12	20

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

8)

Input (Q)	7	10	2	4	5
Output	51	69	21	33	39

- A. $Q \times 9 + 9$ B. $Q \times 6 - 12$
 C. $Q + 6$ D. $Q \times 6 + 9$

9)

Input (Z)	15	13	17	14	12
Output	8	6	10	7	5

- A. $Z \times 7 - 6$ B. $Z + 3$
 C. $Z \times 7 + 5$ D. $Z - 7$

10)

Input (G)	10	6	3	8	7
Output	65	37	16	51	44

- A. $G \times 7 - 7$ B. $G \times 7 - 5$
 C. $G + 5$ D. $G \times 7$

Answers

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



Determine which rule best represents the expression the function machine used.

Answers

1)	Input (K)	19	13	18	15	14
	Output	9	3	8	5	4

- A. $K \times 9 - 6$ B. $K - 10$
 C. $K \times 13 + 6$ D. $K + 6$

1. _____

2)	Input (H)	6	5	2	9	10
	Output	10	9	6	13	14

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

2. _____

3)	Input (U)	2	7	9	8	4
	Output	11	31	39	35	19

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

3. _____

4)	Input (G)	12	14	13	18	11
	Output	4	6	5	10	3

- A. $G \times 8 + 7$ B. $G + 6$
 C. $G - 8$ D. $G \times 11 - 6$

4. _____

5)	Input (W)	9	8	7	2	4
	Output	56	50	44	14	26

- A. $W \times 10 + 2$ B. $W + 2$
 C. $W \times 6 - 5$ D. $W \times 6 + 2$

5. _____

6)	Input (V)	6	2	9	8	10
	Output	55	15	85	75	95

- A. $V \times 12 + 5$ B. $V \times 10 - 5$
 C. $V + 5$ D. $V \times 10 + 4$

6. _____

7)	Input (L)	9	6	10	5	4
	Output	27	18	30	15	12

- A. $L + 3$ B. $L \times 3 + 4$
 C. $L \times 3$ D. $L \times 2$

7. _____

8)	Input (Q)	9	2	6	7	4
	Output	90	20	60	70	40

- A. $Q \times 10$ B. $Q \times 10 + 10$
 C. $Q \times 8$ D. $Q \times 11 - 8$

8. _____

9)	Input (J)	7	8	10	6	2
	Output	26	31	41	21	1

- A. $J \times 10 + 9$ B. $J \times 5 - 9$
 C. $J \times 4 - 9$ D. $J + 9$

9. _____

10)	Input (S)	10	8	7	15	13
	Output	5	3	2	10	8

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

10. _____



Determine which rule best represents the expression the function machine used.

1)

Input (K)	19	13	18	15	14
Output	9	3	8	5	4

- A. $K \times 9 - 6$ B. $K - 10$
 C. $K \times 13 + 6$ D. $K + 6$

2)

Input (H)	6	5	2	9	10
Output	10	9	6	13	14

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

3)

Input (U)	2	7	9	8	4
Output	11	31	39	35	19

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

4)

Input (G)	12	14	13	18	11
Output	4	6	5	10	3

- A. $G \times 8 + 7$ B. $G + 6$
 C. $G - 8$ D. $G \times 11 - 6$

5)

Input (W)	9	8	7	2	4
Output	56	50	44	14	26

- A. $W \times 10 + 2$ B. $W + 2$
 C. $W \times 6 - 5$ D. $W \times 6 + 2$

6)

Input (V)	6	2	9	8	10
Output	55	15	85	75	95

- A. $V \times 12 + 5$ B. $V \times 10 - 5$
 C. $V + 5$ D. $V \times 10 + 4$

7)

Input (L)	9	6	10	5	4
Output	27	18	30	15	12

- A. $L + 3$ B. $L \times 3 + 4$
 C. $L \times 3$ D. $L \times 2$

8)

Input (Q)	9	2	6	7	4
Output	90	20	60	70	40

- A. $Q \times 10$ B. $Q \times 10 + 10$
 C. $Q \times 8$ D. $Q \times 11 - 8$

9)

Input (J)	7	8	10	6	2
Output	26	31	41	21	1

- A. $J \times 10 + 9$ B. $J \times 5 - 9$
 C. $J \times 4 - 9$ D. $J + 9$

10)

Input (S)	10	8	7	15	13
Output	5	3	2	10	8

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

Answers

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



Determine which rule best represents the expression the function machine used.

Answers

1)

Input (S)	4	2	9	7	3
Output	22	12	47	37	17

A. $S + 5$ B. $S \times 5 + 2$
C. $S \times 5 + 3$ D. $S \times 6 - 2$

1. _____

2)

Input (L)	3	9	4	6	8
Output	21	63	28	42	56

A. $L \times 7$ B. $L \times 7 + 12$
C. $L + 9$ D. $L \times 9$

2. _____

3)

Input (K)	5	4	3	9	6
Output	40	32	24	72	48

A. $K \times 8 + 7$ B. $K \times 8$
C. $K + 4$ D. $K \times 10 + 4$

3. _____

4)

Input (W)	7	10	5	6	2
Output	63	87	47	55	23

A. $W \times 8 + 7$ B. $W \times 8$
C. $W \times 12 + 7$ D. $W + 8$

4. _____

5)

Input (V)	3	2	6	5	9
Output	9	8	12	11	15

A. $V \times 6 + 3$ B. $V + 4$
C. $V + 6$ D. $V \times 9 + 4$

5. _____

6)

Input (Y)	6	5	7	2	3
Output	47	40	54	19	26

A. $Y + 7$ B. $Y + 5$
C. $Y \times 7 + 5$ D. $Y \times 7 - 7$

6. _____

7)

Input (P)	4	9	7	10	3
Output	28	63	49	70	21

A. $P + 7$ B. $P \times 9$
C. $P \times 7$ D. $P + 9$

7. _____

8)

Input (G)	7	12	10	15	13
Output	2	7	5	10	8

A. $G - 5$ B. $G \times 5 + 5$
C. $G \times 4$ D. $G \times 5 - 5$

8. _____

9)

Input (R)	18	12	16	14	11
Output	10	4	8	6	3

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

9. _____

10)

Input (F)	9	8	5	4	6
Output	54	48	30	24	36

A. $F \times 9 - 2$ B. $F \times 6$
C. $F \times 6 - 1$ D. $F + 6$

10. _____



Determine which rule best represents the expression the function machine used.

1)

Input (S)	4	2	9	7	3
Output	22	12	47	37	17

A. $S + 5$
B. $S \times 5 + 2$
C. $S \times 5 + 3$
D. $S \times 6 - 2$

2)

Input (L)	3	9	4	6	8
Output	21	63	28	42	56

A. $L \times 7$
B. $L \times 7 + 12$
C. $L + 9$
D. $L \times 9$

3)

Input (K)	5	4	3	9	6
Output	40	32	24	72	48

A. $K \times 8 + 7$
B. $K \times 8$
C. $K + 4$
D. $K \times 10 + 4$

4)

Input (W)	7	10	5	6	2
Output	63	87	47	55	23

A. $W \times 8 + 7$
B. $W \times 8$
C. $W \times 12 + 7$
D. $W + 8$

5)

Input (V)	3	2	6	5	9
Output	9	8	12	11	15

A. $V \times 6 + 3$
B. $V + 4$
C. $V + 6$
D. $V \times 9 + 4$

6)

Input (Y)	6	5	7	2	3
Output	47	40	54	19	26

A. $Y + 7$
B. $Y + 5$
C. $Y \times 7 + 5$
D. $Y \times 7 - 7$

7)

Input (P)	4	9	7	10	3
Output	28	63	49	70	21

A. $P + 7$
B. $P \times 9$
C. $P \times 7$
D. $P + 9$

8)

Input (G)	7	12	10	15	13
Output	2	7	5	10	8

A. $G - 5$
B. $G \times 5 + 5$
C. $G \times 4$
D. $G \times 5 - 5$

9)

Input (R)	18	12	16	14	11
Output	10	4	8	6	3

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

10)

Input (F)	9	8	5	4	6
Output	54	48	30	24	36

A. $F \times 9 - 2$
B. $F \times 6$
C. $F \times 6 - 1$
D. $F + 6$

Answers

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



Determine which rule best represents the expression the function machine used.

Answers

1)	Input (U)	3	6	2	5	8
	Output	18	39	11	32	53

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

1. _____

2)	Input (Z)	5	9	4	8	3
	Output	10	18	8	16	6

- A. $Z \times 2 - 9$ B. $Z \times 2$
 C. $Z \times 6$ D. $Z \times 5 + 6$

2. _____

3)	Input (W)	8	4	9	3	2
	Output	15	11	16	10	9

- A. $W + 7$ B. $W \times 10 - 8$
 C. $W \times 8$ D. $W \times 7 - 10$

3. _____

4)	Input (G)	8	9	6	4	7
	Output	28	31	22	16	25

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

4. _____

5)	Input (R)	4	3	7	5	10
	Output	29	23	47	35	65

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

5. _____

6)	Input (K)	14	16	13	20	19
	Output	4	6	3	10	9

- A. $K \times 13 - 3$ B. $K - 10$
 C. $K \times 10 + 5$ D. $K + 3$

6. _____

7)	Input (F)	3	10	6	9	2
	Output	18	60	36	54	12

- A. $F \times 5 - 9$ B. $F + 9$
 C. $F \times 6$ D. $F + 6$

7. _____

8)	Input (M)	5	4	10	7	8
	Output	43	33	93	63	73

- A. $M \times 14 + 7$ B. $M \times 7$
 C. $M \times 10 + 9$ D. $M \times 10 - 7$

8. _____

9)	Input (T)	2	6	5	10	9
	Output	17	45	38	73	66

- A. $T \times 7 + 3$ B. $T \times 10 + 3$
 C. $T \times 6 - 3$ D. $T \times 7 - 4$

9. _____

10)	Input (N)	4	6	8	10	7
	Output	36	52	68	84	60

- A. $N \times 8 - 5$ B. $N + 8$
 C. $N \times 8$ D. $N \times 8 + 4$

10. _____



Determine which rule best represents the expression the function machine used.

1)

Input (U)	3	6	2	5	8
Output	18	39	11	32	53

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

2)

Input (Z)	5	9	4	8	3
Output	10	18	8	16	6

- A. $Z \times 2 - 9$ B. $Z \times 2$
 C. $Z \times 6$ D. $Z \times 5 + 6$

3)

Input (W)	8	4	9	3	2
Output	15	11	16	10	9

- A. $W + 7$ B. $W \times 10 - 8$
 C. $W \times 8$ D. $W \times 7 - 10$

4)

Input (G)	8	9	6	4	7
Output	28	31	22	16	25

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

5)

Input (R)	4	3	7	5	10
Output	29	23	47	35	65

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

6)

Input (K)	14	16	13	20	19
Output	4	6	3	10	9

- A. $K \times 13 - 3$ B. $K - 10$
 C. $K \times 10 + 5$ D. $K + 3$

7)

Input (F)	3	10	6	9	2
Output	18	60	36	54	12

- A. $F \times 5 - 9$ B. $F + 9$
 C. $F \times 6$ D. $F + 6$

8)

Input (M)	5	4	10	7	8
Output	43	33	93	63	73

- A. $M \times 14 + 7$ B. $M \times 7$
 C. $M \times 10 + 9$ D. $M \times 10 - 7$

9)

Input (T)	2	6	5	10	9
Output	17	45	38	73	66

- A. $T \times 7 + 3$ B. $T \times 10 + 3$
 C. $T \times 6 - 3$ D. $T \times 7 - 4$

10)

Input (N)	4	6	8	10	7
Output	36	52	68	84	60

- A. $N \times 8 - 5$ B. $N + 8$
 C. $N \times 8$ D. $N \times 8 + 4$

Answers

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