



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

Answers

- 1)

Input (T)	13	10	14	15	9
Output	8	5	9	10	4

 A. $T \times 6 - 8$ B. $T \times 5 - 11$
C. $T - 5$ D. $T \times 5 + 7$
- 2)

Input (N)	5	9	10	8	4
Output	16	36	41	31	11

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

Input (K)	4	10	9	5	8
Output	17	29	27	19	25

 A. $K \times 3 - 9$ B. $K \times 2$
C. $K \times 2 + 12$ D. $K \times 2 + 9$
- 4)

Input (U)	4	8	10	5	9
Output	25	41	49	29	45

 A. $U + 4$ B. $U \times 4 + 9$
C. $U \times 9$ D. $U \times 4 + 11$
- 5)

Input (Z)	10	5	9	8	4
Output	16	11	15	14	10

 A. $Z \times 6 - 9$ B. $Z \times 7 - 8$
C. $Z + 8$ D. $Z + 6$
- 6)

Input (J)	8	10	9	4	5
Output	48	60	54	24	30

 A. $J \times 6$ B. $J \times 6 + 10$
C. $J + 7$ D. $J \times 6 - 6$
- 7)

Input (S)	4	8	9	10	5
Output	8	12	13	14	9

 A. $S + 4$ B. $S + 8$
C. $S \times 8$ D. $S \times 4$
- 8)

Input (R)	4	9	10	8	5
Output	19	54	61	47	26

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

Input (L)	10	8	9	4	5
Output	90	72	81	36	45

 A. $L \times 9 - 12$ B. $L \times 9$
C. $L + 10$ D. $L \times 8 - 10$
- 10)

Input (P)	8	9	4	10	5
Output	21	23	13	25	15

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

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



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

Answers

- 1)

Input (T)	13	10	14	15	9
Output	8	5	9	10	4

 A. $T \times 6 - 8$ B. $T \times 5 - 11$
C. $T - 5$ D. $T \times 5 + 7$
- 2)

Input (N)	5	9	10	8	4
Output	16	36	41	31	11

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

Input (K)	4	10	9	5	8
Output	17	29	27	19	25

 A. $K \times 3 - 9$ B. $K \times 2$
C. $K \times 2 + 12$ D. $K \times 2 + 9$
- 4)

Input (U)	4	8	10	5	9
Output	25	41	49	29	45

 A. $U + 4$ B. $U \times 4 + 9$
C. $U \times 9$ D. $U \times 4 + 11$
- 5)

Input (Z)	10	5	9	8	4
Output	16	11	15	14	10

 A. $Z \times 6 - 9$ B. $Z \times 7 - 8$
C. $Z + 8$ D. $Z + 6$
- 6)

Input (J)	8	10	9	4	5
Output	48	60	54	24	30

 A. $J \times 6$ B. $J \times 6 + 10$
C. $J + 7$ D. $J \times 6 - 6$
- 7)

Input (S)	4	8	9	10	5
Output	8	12	13	14	9

 A. $S + 4$ B. $S + 8$
C. $S \times 8$ D. $S \times 4$
- 8)

Input (R)	4	9	10	8	5
Output	19	54	61	47	26

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

Input (L)	10	8	9	4	5
Output	90	72	81	36	45

 A. $L \times 9 - 12$ B. $L \times 9$
C. $L + 10$ D. $L \times 8 - 10$
- 10)

Input (P)	8	9	4	10	5
Output	21	23	13	25	15

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

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



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

Answers

1)

Input (J)	6	7	5	10	8
Output	8	9	7	12	10

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

1. _____

2. _____

2)

Input (U)	13	15	10	12	11
Output	8	10	5	7	6

A. $U \times 8 + 8$

B. $U - 5$

C. $U \times 5$

D. $U \times 8$

3. _____

4. _____

3)

Input (W)	5	6	10	8	7
Output	29	33	49	41	37

A. $W \times 4$

B. $W \times 4 + 9$

C. $W \times 9$

D. $W \times 4 + 11$

5. _____

6. _____

4)

Input (N)	5	6	8	7	10
Output	40	48	64	56	80

A. $N \times 11 - 3$

B. $N \times 8 - 5$

C. $N + 3$

D. $N \times 8$

7. _____

8. _____

5)

Input (P)	8	10	7	6	5
Output	11	13	10	9	8

A. $P + 3$ B. $P \times 3 + 11$
C. $P \times 3 - 10$ D. $P + 9$

9. _____

10. _____

6)

Input (V)	7	10	8	6	5
Output	35	53	41	29	23

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

7)

Input (Z)	5	8	7	10	6
Output	22	40	34	52	28

A. $Z \times 6$

B. $Z \times 8 + 8$

C. $Z \times 6 - 8$

D. $Z \times 6 - 9$

8)

Input (K)	10	8	5	6	7
Output	38	32	23	26	29

A. $K \times 3$

B. $K \times 3 + 8$

C. $K \times 8 + 8$

D. $K \times 3 + 11$

9)

Input (G)	5	10	6	7	8
Output	14	24	16	18	20

 A. $G \times 5 - 4$ B. $G \times 2 + 6$
C. $G \times 2$ D. $G \times 2 + 4$

10)	Input (F)	6	8	7	5	10	A. $F \times 9 + 4$	B. $F \times 5 + 7$
	Output	30	40	35	25	50	C. $F \times 5$	D. $F \times 5 - 6$



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

Answers

1)

Input (J)	6	7	5	10	8
Output	8	9	7	12	10

A. $J \times 2 - 5$

B. $J \times 6$

C. $J \times 6 + 6$

D. $J + 2$

1. **D**

2)

Input (U)	13	15	10	12	11
Output	8	10	5	7	6

A. $U \times 8 + 8$

B. $U - 5$

C. $U \times 5$

D. $U \times 8$

2. **B**3. **B**

3)

Input (W)	5	6	10	8	7
Output	29	33	49	41	37

A. $W \times 4$

B. $W \times 4 + 9$

C. $W \times 9$

D. $W \times 4 + 11$

4. **D**5. **A**

4)

Input (N)	5	6	8	7	10
Output	40	48	64	56	80

A. $N \times 11 - 3$

B. $N \times 8 - 5$

C. $N + 3$

D. $N \times 8$

6. **D**7. **C**8. **B**

5)

Input (P)	8	10	7	6	5
Output	11	13	10	9	8

 A. $P + 3$ B. $P \times 3 + 11$
C. $P \times 3 - 10$ D. $P + 9$

9. **D**10. **C**

6)

Input (V)	7	10	8	6	5
Output	35	53	41	29	23

A. $V + 6$

B. $V + 7$

C. $V \times 5 - 7$

D. $V \times 6 - 7$

7)

Input (Z)	5	8	7	10	6
Output	22	40	34	52	28

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

8)

Input (K)	10	8	5	6	7
Output	38	32	23	26	29

A. $K \times 3$

B. $K \times 3 + 8$

C. $K \times 8 + 8$

D. $K \times 3 + 11$

9)

Input (G)	5	10	6	7	8
Output	14	24	16	18	20

 A. $G \times 5 - 4$ B. $G \times 2 + 6$
C. $G \times 2$ D. $G \times 2 + 4$

10)	Input (F)	6	8	7	5	10	A. $F \times 9 + 4$	B. $F \times 5 + 7$
	Output	30	40	35	25	50	C. $F \times 5$	D. $F \times 5 - 6$



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

Answers

1)

Input (W)	4	9	3	7	2
Output	13	18	12	16	11

 A. $W \times 14 + 10$ B. $W \times 9 + 9$
C. $W \times 10$ D. $W + 9$

1. _____

2)

Input (P)	2	4	3	9	7
Output	19	29	24	54	44

A. $P \times 5 + 9$

B. $P + 9$

C. $P \times 9 + 9$

D. $P + 5$

2. _____

3)

Input (J)	7	4	9	2	3
Output	40	19	54	5	12

A. $J + 7$

B. $J \times 7 - 11$

C. $J \times 9 + 9$

D. $J \times 7 - 9$

3. _____

4)

Input (F)	4	7	2	9	3
Output	42	72	22	92	32

A. $F \times 10$ B. $F \times 14 + 2$
C. $F + 10$ D. $F \times 10 + 2$

4. _____

5)

Input (G)	16	14	9	11	10
Output	9	7	2	4	3

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

5. _____

6)

Input (Y)	9	4	7	3	2
Output	90	40	70	30	20

A. $Y + 10$

B. $Y \times 10 - 4$

C. $Y \times 3$

D. $Y \times 10$

6. _____

7)	Input (L)	10	8	13	15	9	A. $L \times 6 - 9$	B. $L + 8$
	Output	4	2	7	9	3	C. $L - 6$	D. $L \times 6 + 9$

7. _____

8)

Input (R)	9	3	7	4	2
Output	11	5	9	6	4

A. $R \times 7 + 6$

B. $R \times 2 - 9$

C. $R + 2$

D. $R + 6$

8. _____

9)

Input (T)	4	9	2	3	7
Output	21	36	15	18	30

A. $T + 9$ B. $T \times 3 + 9$
C. $T \times 3 + 10$ D. $T \times 4 - 9$

9. _____

10)	Input (H)	2	3	4	9	7	A. $H \times 7 - 9$	B. $H \times 5 - 9$
	Output	1	6	11	36	26	C. $H + 9$	D. $H + 5$

10. _____



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

Answers

1)	Input (W)	4	9	3	7	2	A. $W \times 14 + 10$	B. $W \times 9 + 9$
	Output	13	18	12	16	11	C. $W \times 10$	D. $W + 9$

1. **D**

2)	Input (P)	2	4	3	9	7	A. $P \times 5 + 9$	B. $P + 9$
	Output	19	29	24	54	44	C. $P \times 9 + 9$	D. $P + 5$

2. **A**3. **D**

3)	Input (J)	7	4	9	2	3	A. $J + 7$	B. $J \times 7 - 11$
	Output	40	19	54	5	12	C. $J \times 9 + 9$	D. $J \times 7 - 9$

4. **D**5. **D**

4)	Input (F)	4	7	2	9	3	A. $F \times 10$	B. $F \times 14 + 2$
	Output	42	72	22	92	32	C. $F + 10$	D. $F \times 10 + 2$

6. **D**7. **C**8. **C**

5)	Input (G)	16	14	9	11	10	A. $G \times 9 + 9$	B. $G \times 7$
	Output	9	7	2	4	3	C. $G \times 9$	D. $G - 7$

9. **B**10. **B**

6)	Input (Y)	9	4	7	3	2	A. $Y + 10$	B. $Y \times 10 - 4$
	Output	90	40	70	30	20	C. $Y \times 3$	D. $Y \times 10$

7)	Input (L)	10	8	13	15	9	A. $L \times 6 - 9$	B. $L + 8$
	Output	4	2	7	9	3	C. $L - 6$	D. $L \times 6 + 9$

8)	Input (R)	9	3	7	4	2	A. $R \times 7 + 6$	B. $R \times 2 - 9$
	Output	11	5	9	6	4	C. $R + 2$	D. $R + 6$

9)	Input (T)	4	9	2	3	7	A. $T + 9$	B. $T \times 3 + 9$
	Output	21	36	15	18	30	C. $T \times 3 + 10$	D. $T \times 4 - 9$

10)	Input (H)	2	3	4	9	7	A. $H \times 7 - 9$	B. $H \times 5 - 9$
	Output	1	6	11	36	26	C. $H + 9$	D. $H + 5$



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

Answers

- 1)

Input (H)	7	10	4	6	9
Output	16	19	13	15	18

 A. $H \times 2$ B. $H + 9$
C. $H \times 9 - 1$ D. $H \times 11 - 2$
- 2)

Input (L)	6	10	9	7	4
Output	46	70	64	52	34

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

Input (G)	9	10	7	4	6
Output	88	98	68	38	58

 A. $G \times 10 - 2$ B. $G + 10$
C. $G \times 13 + 2$ D. $G \times 11 - 2$
- 4)

Input (Q)	14	18	12	17	15
Output	6	10	4	9	7

 A. $Q \times 11 - 10$ B. $Q \times 10$
C. $Q - 8$ D. $Q \times 10 + 10$
- 5)

Input (F)	7	4	10	6	9
Output	17	14	20	16	19

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

Input (N)	20	17	14	19	16
Output	10	7	4	9	6

 A. $N + 2$ B. $N - 10$
C. $N + 10$ D. $N \times 10 + 4$
- 7)

Input (U)	4	6	7	10	9
Output	25	33	37	49	45

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

Input (M)	10	9	4	7	6
Output	40	35	10	25	20

 A. $M + 10$ B. $M \times 10 + 10$
C. $M \times 5 - 10$ D. $M \times 6 - 10$
- 9)

Input (J)	7	9	4	6	10
Output	58	72	37	51	79

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

Input (P)	9	4	6	7	10
Output	63	28	42	49	70

 A. $P \times 7 - 9$ B. $P \times 7$
C. $P + 8$ D. $P \times 11 + 8$

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



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

Answers

- 1)

Input (H)	7	10	4	6	9
Output	16	19	13	15	18

 A. $H \times 2$ B. $H + 9$
C. $H \times 9 - 1$ D. $H \times 11 - 2$
- 2)

Input (L)	6	10	9	7	4
Output	46	70	64	52	34

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

Input (G)	9	10	7	4	6
Output	88	98	68	38	58

 A. $G \times 10 - 2$ B. $G + 10$
C. $G \times 13 + 2$ D. $G \times 11 - 2$
- 4)

Input (Q)	14	18	12	17	15
Output	6	10	4	9	7

 A. $Q \times 11 - 10$ B. $Q \times 10$
C. $Q - 8$ D. $Q \times 10 + 10$
- 5)

Input (F)	7	4	10	6	9
Output	17	14	20	16	19

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

Input (N)	20	17	14	19	16
Output	10	7	4	9	6

 A. $N + 2$ B. $N - 10$
C. $N + 10$ D. $N \times 10 + 4$
- 7)

Input (U)	4	6	7	10	9
Output	25	33	37	49	45

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

Input (M)	10	9	4	7	6
Output	40	35	10	25	20

 A. $M + 10$ B. $M \times 10 + 10$
C. $M \times 5 - 10$ D. $M \times 6 - 10$
- 9)

Input (J)	7	9	4	6	10
Output	58	72	37	51	79

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

Input (P)	9	4	6	7	10
Output	63	28	42	49	70

 A. $P \times 7 - 9$ B. $P \times 7$
C. $P + 8$ D. $P \times 11 + 8$

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



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

Answers

1)

Input (G)	8	7	3	9	4
Output	25	23	15	27	17

A. $G \times 2 + 9$ B. $G \times 9$
C. $G \times 2 + 12$ D. $G \times 2$

1. _____

2)

Input (F)	9	7	4	3	8
Output	11	9	6	5	10

A. $F \times 2 + 12$

B. $F + 2$

C. $F \times 7 + 10$

D. $F \times 2$

2. _____

3)

Input (J)	3	8	4	9	7
Output	10	20	12	22	18

A. $J + 2$

B. $J \times 2 + 7$

C. $J \times 4$

D. $J \times 2 + 4$

3. _____

4)

Input (K)	4	3	8	7	9
Output	24	18	48	42	54

A. $K \times 3$

B. $K \times 8 - 3$

C. $K \times 6$

D. $K + 3$

4. _____

5)

Input (V)	7	9	3	8	4
Output	23	27	15	25	17

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

5. _____

6)

Input (Z)	15	14	10	9	13
Output	9	8	4	3	7

A. $Z \times 9$

B. $Z - 6$

C. $Z + 6$

D. $Z \times 6$

6. _____

7)

Input (T)	3	8	4	9	7
Output	5	10	6	11	9

A. $T \times 5 - 9$

B. $T + 2$

C. $T \times 5 + 9$

D. $T \times 9$

7. _____

8)

Input (Q)	4	3	9	7	8
Output	11	6	36	26	31

A. $Q \times 9$

B. $Q \times 6 - 9$

C. $Q \times 5 - 10$

D. $Q \times 5 - 9$

8. _____

9)

Input (M)	4	3	7	9	8
Output	40	30	70	90	80

A. $M \times 12 - 7$

B. $M \times 10$

C. $M \times 10 - 8$

D. $M + 10$

9. _____

10)	Input (H)	18	17	14	13	19	A. $H \times 9$	B. $H - 10$
	Output	8	7	4	3	9	C. $H + 9$	D. $H \times 12 - 9$

10. _____



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

Answers

1)

Input (G)	8	7	3	9	4
Output	25	23	15	27	17

A. $G \times 2 + 9$ B. $G \times 9$
C. $G \times 2 + 12$ D. $G \times 2$

1. **A**

2)

Input (F)	9	7	4	3	8
Output	11	9	6	5	10

A. $F \times 2 + 12$

B. $F + 2$

C. $F \times 7 + 10$

D. $F \times 2$

2. **B**3. **D**

3)

Input (J)	3	8	4	9	7
Output	10	20	12	22	18

A. $J + 2$

B. $J \times 2 + 7$

C. $J \times 4$

D. $J \times 2 + 4$

4. **C**5. **C**

4)

Input (K)	4	3	8	7	9
Output	24	18	48	42	54

A. $K \times 3$

B. $K \times 8 - 3$

C. $K \times 6$

D. $K + 3$

6. **B**7. **B**8. **D**

5)

Input (V)	7	9	3	8	4
Output	23	27	15	25	17

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

9. **B**10. **B**

6)

Input (Z)	15	14	10	9	13
Output	9	8	4	3	7

A. $Z \times 9$

B. $Z - 6$

C. $Z + 6$

D. $Z \times 6$

7)

Input (T)	3	8	4	9	7
Output	5	10	6	11	9

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

8)

Input (Q)	4	3	9	7	8
Output	11	6	36	26	31

A. $Q \times 9$

B. $Q \times 6 - 9$

C. $Q \times 5 - 10$

D. $Q \times 5 - 9$

9)

Input (M)	4	3	7	9	8
Output	40	30	70	90	80

 A. $M \times 12 - 7$ B. $M \times 10$
C. $M \times 10 - 8$ D. $M + 10$

10)	Input (H)	18	17	14	13	19	A. $H \times 9$	B. $H - 10$
	Output	8	7	4	3	9	C. $H + 9$	D. $H \times 12 - 9$



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

Answers

1)	Input (R)	11	15	13	9	8	A. $R \times 9$	B. $R \times 5 + 10$
	Output	6	10	8	4	3	C. $R \times 5 - 12$	D. $R - 5$

1. _____

2)

Input (P)	8	3	4	6	10
Output	17	12	13	15	19

A. $P \times 9$

B. $P + 3$

C. $P + 9$

D. $P \times 8 - 3$

2. _____

3)

Input (T)	3	8	6	10	4
Output	6	16	12	20	8

A. $T \times 2$

B. $T \times 2 - 6$

C. $T \times 6 + 4$

D. $T \times 2 + 3$

3. _____

4)

Input (V)	3	6	4	8	10
Output	21	51	31	71	91

A. $V \times 10 - 9$	B. $V \times 9$
C. $V \times 10 + 11$	D. $V \times 10$

4. _____

5)

Input (L)	6	4	3	8	10
Output	37	27	22	47	57

A. $L \times 5$ B. $L \times 5 + 9$
C. $L \times 5 + 7$ D. $L + 5$

5. _____

6)

Input (J)	17	13	12	15	19
Output	8	4	3	6	10

A. $J \times 9$

B. $J \times 9 - 10$

C. $J - 9$

D. $J + 9$

6. _____

7)

Input (U)	3	8	6	10	4
Output	7	32	22	42	12

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

7. _____

8)

Input (N)	3	4	6	8	10
Output	29	36	50	64	78

A. $N \times 7 + 10$

B. $N \times 7 + 8$

C. $N \times 7 - 9$

D. $N + 7$

8. _____

9)

Input (H)	8	4	6	3	10
Output	64	32	48	24	80

A. $H \times 11 + 9$ B. $H \times 8 + 11$
C. $H \times 8$ D. $H \times 9$

9. _____

10)

Input (Z)	6	3	10	8	4
Output	17	11	25	21	13

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

10. _____



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

Answers

- 1)

Input (R)	11	15	13	9	8
Output	6	10	8	4	3

 A. $R \times 9$ B. $R \times 5 + 10$
C. $R \times 5 - 12$ D. $R - 5$

1. **D**

- 2)

Input (P)	8	3	4	6	10
Output	17	12	13	15	19

 A. $P \times 9$ B. $P + 3$
C. $P + 9$ D. $P \times 8 - 3$

2. **C**

- 3)

Input (T)	3	8	6	10	4
Output	6	16	12	20	8

 A. $T \times 2$ B. $T \times 2 - 6$
C. $T \times 6 + 4$ D. $T \times 2 + 3$

3. **A**4. **A**

- 4)

Input (V)	3	6	4	8	10
Output	21	51	31	71	91

 A. $V \times 10 - 9$ B. $V \times 9$
C. $V \times 10 + 11$ D. $V \times 10$

5. **C**6. **C**

- 5)

Input (L)	6	4	3	8	10
Output	37	27	22	47	57

 A. $L \times 5$ B. $L \times 5 + 9$
C. $L \times 5 + 7$ D. $L + 5$

7. **A**8. **B**

- 6)

Input (J)	17	13	12	15	19
Output	8	4	3	6	10

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

9. **C**10. **C**

- 7)

Input (U)	3	8	6	10	4
Output	7	32	22	42	12

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

- 8)

Input (N)	3	4	6	8	10
Output	29	36	50	64	78

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

- 9)

Input (H)	8	4	6	3	10
Output	64	32	48	24	80

 A. $H \times 11 + 9$ B. $H \times 8 + 11$
C. $H \times 8$ D. $H \times 9$

- 10)

Input (Z)	6	3	10	8	4
Output	17	11	25	21	13

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



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

Answers

1)

Input (S)	3	4	6	5	8
Output	21	28	42	35	56

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

1. _____

2)

Input (V)	4	6	5	3	8
Output	16	24	20	12	32

A. $V \times 7 - 8$

B. $V \times 4 + 7$

C. $V \times 4$

D. $V + 8$

2. _____

3)

Input (Y)	4	8	5	6	3
Output	17	25	19	21	15

A. $Y \times 2$

B. $Y + 2$

C. $Y \times 2 - 8$

D. $Y \times 2 + 9$

3. _____

4)

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

A. $M \times 8 + 8$

B. $M - 6$

C. $M + 8$

D. $M \times 8$

4. _____

5)

Input (Z)	3	5	8	6	4
Output	21	41	71	51	31

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

5. _____

6)

Input (F)	4	6	8	5	3
Output	7	9	11	8	6

A. $F \times 6$

B. $F + 3$

C. $F + 6$

D. $F \times 3 + 8$

6. _____

7)	Input (J)	4	8	5	6	3	A. $J \times 9$	B. $J + 9$
	Output	13	17	14	15	12	C. $J \times 3$	D. $J + 3$

7. _____

8)

Input (N)	6	4	3	5	8
Output	29	17	11	23	41

A. $N \times 6 - 7$

B. $N + 6$

C. $N + 7$

D. $N \times 11 + 7$

8. _____

9)

Input (T)	13	10	15	12	11
Output	6	3	8	5	4

A. $T - 7$

B. $T \times 10$

C. $T \times 7 + 9$

D. $T \times 7 - 12$

9. _____

10)	Input (R)	4	3	5	8	6	A. $R \times 9 + 8$	B. $R \times 8 - 8$
	Output	44	35	53	80	62	C. $R + 8$	D. $R + 9$

10. _____



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

Answers

1)	Input (S)	3	4	6	5	8	A. $S \times 9 + 4$	B. $S \times 8 - 4$
	Output	21	28	42	35	56	C. $S \times 7$	D. $S \times 4$

1. **C**

2)	Input (V)	4	6	5	3	8	A. $V \times 7 - 8$	B. $V \times 4 + 7$
	Output	16	24	20	12	32	C. $V \times 4$	D. $V + 8$

2. **C**

3)	Input (Y)	4	8	5	6	3	A. $Y \times 2$	B. $Y + 2$
	Output	17	25	19	21	15	C. $Y \times 2 - 8$	D. $Y \times 2 + 9$

3. **D**

4)	Input (M)	14	10	11	12	9	A. $M \times 8 + 8$	B. $M - 6$
	Output	8	4	5	6	3	C. $M + 8$	D. $M \times 8$

4. **B**

5)	Input (Z)	3	5	8	6	4	A. $Z + 10$	B. $Z \times 13 - 9$
	Output	21	41	71	51	31	C. $Z \times 9$	D. $Z \times 10 - 9$

5. **D**

6)	Input (F)	4	6	8	5	3	A. $F \times 6$	B. $F + 3$
	Output	7	9	11	8	6	C. $F + 6$	D. $F \times 3 + 8$

6. **B**

7)	Input (J)	4	8	5	6	3	A. $J \times 9$	B. $J + 9$
	Output	13	17	14	15	12	C. $J \times 3$	D. $J + 3$

7. **B**

8)	Input (N)	6	4	3	5	8	A. $N \times 6 - 7$	B. $N + 6$
	Output	29	17	11	23	41	C. $N + 7$	D. $N \times 11 + 7$

8. **A**

9)	Input (T)	13	10	15	12	11	A. $T - 7$	B. $T \times 10$
	Output	6	3	8	5	4	C. $T \times 7 + 9$	D. $T \times 7 - 12$

9. **A**

10)	Input (R)	4	3	5	8	6	A. $R \times 9 + 8$	B. $R \times 8 - 8$
	Output	44	35	53	80	62	C. $R + 8$	D. $R + 9$

10. **A**



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

Answers

- 1)

Input (T)	2	7	6	9	8
Output	5	10	9	12	11

 A. $T + 3$ B. $T \times 8 + 6$
C. $T \times 2 - 6$ D. $T \times 6$
- 2)

Input (V)	8	7	6	9	2
Output	80	70	60	90	20

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

Input (G)	8	7	6	9	2
Output	46	39	32	53	4

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

Input (Y)	7	2	8	9	6
Output	72	22	82	92	62

 A. $Y \times 10 + 2$ B. $Y \times 14 + 2$
C. $Y \times 9 - 2$ D. $Y \times 10 - 3$
- 5)

Input (R)	2	7	8	6	9
Output	12	27	30	24	33

 A. $R \times 6$ B. $R \times 7 + 6$
C. $R \times 3 + 6$ D. $R + 6$
- 6)

Input (F)	8	6	7	2	9
Output	78	58	68	18	88

 A. $F \times 11 - 2$ B. $F \times 10 + 1$
C. $F + 10$ D. $F \times 10 - 2$
- 7)

Input (U)	2	6	9	7	8
Output	7	11	14	12	13

 A. $U + 5$ B. $U \times 7 - 10$
C. $U + 10$ D. $U \times 5 + 13$
- 8)

Input (H)	17	18	19	16	12
Output	7	8	9	6	2

 A. $H + 10$ B. $H - 10$
C. $H \times 10$ D. $H \times 14 + 9$
- 9)

Input (Q)	2	9	6	7	8
Output	8	36	24	28	32

 A. $Q \times 4 + 5$ B. $Q \times 4$
C. $Q \times 9 + 6$ D. $Q + 4$
- 10)

Input (Z)	13	15	16	9	14
Output	6	8	9	2	7

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

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



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

Answers

- 1)

Input (T)	2	7	6	9	8
Output	5	10	9	12	11

 A. $T + 3$ B. $T \times 8 + 6$
C. $T \times 2 - 6$ D. $T \times 6$
- 2)

Input (V)	8	7	6	9	2
Output	80	70	60	90	20

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

Input (G)	8	7	6	9	2
Output	46	39	32	53	4

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

Input (Y)	7	2	8	9	6
Output	72	22	82	92	62

 A. $Y \times 10 + 2$ B. $Y \times 14 + 2$
C. $Y \times 9 - 2$ D. $Y \times 10 - 3$
- 5)

Input (R)	2	7	8	6	9
Output	12	27	30	24	33

 A. $R \times 6$ B. $R \times 7 + 6$
C. $R \times 3 + 6$ D. $R + 6$
- 6)

Input (F)	8	6	7	2	9
Output	78	58	68	18	88

 A. $F \times 11 - 2$ B. $F \times 10 + 1$
C. $F + 10$ D. $F \times 10 - 2$
- 7)

Input (U)	2	6	9	7	8
Output	7	11	14	12	13

 A. $U + 5$ B. $U \times 7 - 10$
C. $U + 10$ D. $U \times 5 + 13$
- 8)

Input (H)	17	18	19	16	12
Output	7	8	9	6	2

 A. $H + 10$ B. $H - 10$
C. $H \times 10$ D. $H \times 14 + 9$
- 9)

Input (Q)	2	9	6	7	8
Output	8	36	24	28	32

 A. $Q \times 4 + 5$ B. $Q \times 4$
C. $Q \times 9 + 6$ D. $Q + 4$
- 10)

Input (Z)	13	15	16	9	14
Output	6	8	9	2	7

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

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



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

Answers

1)

Input (T)	9	4	2	10	7
Output	54	19	5	61	40

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

1. _____

2)

Input (P)	4	2	10	9	7
Output	28	14	70	63	49

A. $P \times 7$

B. $P \times 7 + 7$

C. $P + 4$

D. $P + 7$

2. _____

3)

Input (H)	10	4	2	9	7
Output	102	42	22	92	72

A. $H + 10$

B. $H \times 10 - 4$

C. $H + 2$

D. $H \times 10 + 2$

3. _____

4)

Input (G)	7	2	9	10	4
Output	15	10	17	18	12

A. $G \times 8 + 4$ B. $G \times 11 - 2$
C. $G \times 8 - 1$ D. $G + 8$

4. _____

5)

Input (L)	2	10	4	9	7
Output	11	19	13	18	16

A. $L + 9$ B. $L \times 4$
C. $L \times 9 - 7$ D. $L \times 9$

5. _____

6)

Input (Q)	7	4	10	9	2
Output	73	46	100	91	28

A. $Q \times 9 + 11$

B. $Q \times 9$

C. $Q \times 9 + 10$

D. $Q \times 12 - 10$

6. _____

7)

Input (M)	14	7	12	15	9
Output	9	2	7	10	4

A. $M \times 10$

B. $M \times 10 + 10$

C. $M \times 7 - 10$

D. $M - 5$

7. _____

8)

Input (J)	2	4	10	7	9
Output	3	13	43	28	38

A. $J \times 7$

B. $J \times 5 + 9$

C. $J \times 4 - 7$

D. $J \times 5 - 7$

8. _____

9)

Input (R)	10	9	7	2	4
Output	90	81	63	18	36

A. $R + 9$

B. $R \times 11 - 2$

C. $R \times 9 - 5$

D. $R \times 9$

9. _____

10)	Input (N)	7	2	4	9	10	A. $N \times 2 + 9$	B. $N \times 3 - 9$
	Output	23	13	17	27	29	C. $N \times 7 + 9$	D. $N + 2$

10. _____



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

Answers

1)	Input (T)	9	4	2	10	7	A. $T \times 7 - 9$	B. $T \times 9$
	Output	54	19	5	61	40	C. $T + 9$	D. $T \times 7 - 11$

1. **A**

2)	Input (P)	4	2	10	9	7	A. $P \times 7$	B. $P \times 7 + 7$
	Output	28	14	70	63	49	C. $P + 4$	D. $P + 7$

2. **A**3. **D**

3)	Input (H)	10	4	2	9	7	A. $H + 10$	B. $H \times 10 - 4$
	Output	102	42	22	92	72	C. $H + 2$	D. $H \times 10 + 2$

4. **D**5. **A**

4)	Input (G)	7	2	9	10	4	A. $G \times 8 + 4$	B. $G \times 11 - 2$
	Output	15	10	17	18	12	C. $G \times 8 - 1$	D. $G + 8$

6. **C**7. **D**8. **D**

5)	Input (L)	2	10	4	9	7	A. $L + 9$	B. $L \times 4$
	Output	11	19	13	18	16	C. $L \times 9 - 7$	D. $L \times 9$

9. **D**10. **A**

6)	Input (Q)	7	4	10	9	2	A. $Q \times 9 + 11$	B. $Q \times 9$
	Output	73	46	100	91	28	C. $Q \times 9 + 10$	D. $Q \times 12 - 10$

7)	Input (M)	14	7	12	15	9	A. $M \times 10$	B. $M \times 10 + 10$
	Output	9	2	7	10	4	C. $M \times 7 - 10$	D. $M - 5$

8)	Input (J)	2	4	10	7	9	A. $J \times 7$	B. $J \times 5 + 9$
	Output	3	13	43	28	38	C. $J \times 4 - 7$	D. $J \times 5 - 7$

9)	Input (R)	10	9	7	2	4	A. $R + 9$	B. $R \times 11 - 2$
	Output	90	81	63	18	36	C. $R \times 9 - 5$	D. $R \times 9$

10)	Input (N)	7	2	4	9	10	A. $N \times 2 + 9$	B. $N \times 3 - 9$
	Output	23	13	17	27	29	C. $N \times 7 + 9$	D. $N + 2$



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

Answers

1)

Input (Z)	9	5	7	2	10
Output	71	43	57	22	78

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

1. _____

2)

Input (Q)	9	5	7	2	10
Output	12	8	10	5	13

A. $Q + 4$

B. $Q \times 3 + 3$

C. $Q \times 3$

D. $Q + 3$

2. _____

3)

Input (V)	2	5	10	7	9
Output	6	27	62	41	55

A. $V \times 7 + 10$

B. $V \times 7 - 8$

C. $V \times 8$

D. $V \times 7 - 7$

3. _____

4)

Input (Y)	5	7	2	10	9
Output	22	28	13	37	34

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

4. _____

5)

Input (M)	7	5	2	9	10
Output	34	26	14	42	46

 A. $M \times 4 + 7$ B. $M \times 4 + 6$
C. $M + 4$ D. $M \times 6$

5. _____

6)

Input (P)	7	2	9	10	5
Output	55	10	73	82	37

A. $P + 8$

B. $P \times 9$

C. $P \times 9 - 8$

D. $P \times 9 - 10$

6. _____

7)

Input (K)	2	10	7	9	5
Output	12	20	17	19	15

 A. $K + 10$ B. $K \times 13 - 4$
C. $K \times 4$ D. $K \times 13 + 4$

7. _____

8)

Input (H)	20	12	15	19	17
Output	10	2	5	9	7

A. $H \times 10 - 5$

B. $H + 10$

C. $H \times 11 - 2$

D. $H - 10$

8. _____

9)

Input (G)	7	2	10	5	9
Output	14	4	20	10	18

 A. $G \times 2 - 6$ B. $G \times 2 + 4$
C. $G \times 2$ D. $G \times 1 - 3$

9. _____

10)

Input (L)	20	12	17	15	19
Output	10	2	7	5	9

A. $L - 10$

B. $L \times 13 - 2$

C. $L + 10$

D. $L \times 10 - 5$

10. _____



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

Answers

1)

Input (Z)	9	5	7	2	10
Output	71	43	57	22	78

A. $Z \times 6 - 8$

B. $Z \times 7 - 11$

C. $Z \times 7 + 8$

D. $Z + 8$

1. **C**

2)

Input (Q)	9	5	7	2	10
Output	12	8	10	5	13

A. $Q + 4$

B. $Q \times 3 + 3$

C. $Q \times 3$

D. $Q + 3$

2. **D**

3)

Input (V)	2	5	10	7	9
Output	6	27	62	41	55

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

3. **B**

4)

Input (Y)	5	7	2	10	9
Output	22	28	13	37	34

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

4. **D**

5)

Input (M)	7	5	2	9	10
Output	34	26	14	42	46

A. $M \times 4 + 7$ B. $M \times 4 + 6$
C. $M + 4$ D. $M \times 6$

5. **B**

6)

Input (P)	7	2	9	10	5
Output	55	10	73	82	37

A. $P + 8$

B. $P \times 9$

C. $P \times 9 - 8$

D. $P \times 9 - 10$

6. **C**

7)

Input (K)	2	10	7	9	5
Output	12	20	17	19	15

A. $K + 10$ B. $K \times 13 - 4$
C. $K \times 4$ D. $K \times 13 + 4$

7. **A**

8)

Input (H)	20	12	15	19	17
Output	10	2	5	9	7

A. $H \times 10 - 5$

B. $H + 10$

C. $H \times 11 - 2$

D. $H - 10$

8. **D**

9)

Input (G)	7	2	10	5	9
Output	14	4	20	10	18

A. $G \times 2 - 6$ B. $G \times 2 + 4$
C. $G \times 2$ D. $G \times 1 - 3$

9. **C**

10)

Input (L)	20	12	17	15	19
Output	10	2	7	5	9

A. $L - 10$

B. $L \times 13 - 2$

C. $L + 10$

D. $L \times 10 - 5$

10. **A**