

Function Machines

Advanced — ANSWER KEY

Two-step rules. Multiply, then add.

Think: The rule does TWO things. Find the times part first, then the plus/minus part.

1. Guess my rule. Fill the blanks, then write the rule.

Machine A

IN ($\triangle$)	$\rightarrow$	OUT ($\square$)
7	$\rightarrow$	26
3	$\rightarrow$	14
1	$\rightarrow$	8
0	$\rightarrow$	5
9	$\rightarrow$	32
6	$\rightarrow$	23

Rule: $\square = \triangle \times 3 + 5$

Machine B

IN ($\triangle$)	$\rightarrow$	OUT ($\square$)
6	$\rightarrow$	18
2	$\rightarrow$	10
0	$\rightarrow$	6
8	$\rightarrow$	22
5	$\rightarrow$	16
4	$\rightarrow$	14

Rule: $\square = \triangle \times 2 + 6$

Machine C

IN ($\triangle$)	$\rightarrow$	OUT ($\square$)
2	$\rightarrow$	10
0	$\rightarrow$	4
9	$\rightarrow$	31
6	$\rightarrow$	22
4	$\rightarrow$	16
8	$\rightarrow$	28

Rule: $\square = \triangle \times 3 + 4$

Machine D

IN ($\triangle$)	$\rightarrow$	OUT ($\square$)
5	$\rightarrow$	14
3	$\rightarrow$	10
1	$\rightarrow$	6
0	$\rightarrow$	4
4	$\rightarrow$	12
6	$\rightarrow$	16

Rule: $\square = \triangle \times 2 + 4$