

# Function Machines

## Practice — ANSWER KEY

Bigger numbers — and times, not just plus.

**Think:** The rule might multiply. Try: does OUT = IN doubled? tripled?

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

Machine A

| IN ( $\triangle$ ) | $\rightarrow$ | OUT ( $\square$ ) |
|--------------------|---------------|-------------------|
| 11                 | $\rightarrow$ | 5                 |
| 7                  | $\rightarrow$ | 1                 |
| 21                 | $\rightarrow$ | 15                |
| 6                  | $\rightarrow$ | 0                 |
| 17                 | $\rightarrow$ | 11                |

Rule:  $\square = \triangle - 6$

Machine B

| IN ( $\triangle$ ) | $\rightarrow$ | OUT ( $\square$ ) |
|--------------------|---------------|-------------------|
| 5                  | $\rightarrow$ | 15                |
| 2                  | $\rightarrow$ | 6                 |
| 0                  | $\rightarrow$ | 0                 |
| 4                  | $\rightarrow$ | 12                |
| 1                  | $\rightarrow$ | 3                 |

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

Machine C

| IN ( $\triangle$ ) | $\rightarrow$ | OUT ( $\square$ ) |
|--------------------|---------------|-------------------|
| 12                 | $\rightarrow$ | 25                |
| 2                  | $\rightarrow$ | 15                |
| 8                  | $\rightarrow$ | 21                |
| 13                 | $\rightarrow$ | 26                |
| 15                 | $\rightarrow$ | 28                |

Rule:  $\square = \triangle + 13$

Machine D

| IN ( $\triangle$ ) | $\rightarrow$ | OUT ( $\square$ ) |
|--------------------|---------------|-------------------|
| 8                  | $\rightarrow$ | 18                |
| 1                  | $\rightarrow$ | 11                |
| 4                  | $\rightarrow$ | 14                |
| 13                 | $\rightarrow$ | 23                |
| 9                  | $\rightarrow$ | 19                |

Rule:  $\square = \triangle + 10$