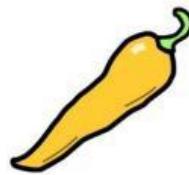


Algebra



Form Expressions

1a. What is the 5th expression in the sequence?

$$\begin{array}{ll} 1^{\text{st}} & y \rightarrow \boxed{\quad} \rightarrow 2y \\ 2^{\text{nd}} & y + 1 \rightarrow \boxed{x 2} \rightarrow 2y + 2 \\ 3^{\text{rd}} & y + 2 \rightarrow \boxed{\quad} \rightarrow 2y + 4 \end{array}$$



1b. What is the 7th expression in the sequence?

$$\begin{array}{ll} 1^{\text{st}} & y \rightarrow \boxed{\quad} \rightarrow y + 3 \\ 2^{\text{nd}} & 2y \rightarrow \boxed{+ 3} \rightarrow 2y + 3 \\ 3^{\text{rd}} & 3y \rightarrow \boxed{\quad} \rightarrow 3y + 3 \end{array}$$



2a. Raza has created a function machine.

$$a \rightarrow \boxed{+ 5}$$

She says,



The expression formed from this function machine is $5a$.

2b. Leon has created a function machine.

$$b \rightarrow \boxed{x 2}$$

He says,



The expression formed from this function machine is $b \times 2$.

Explain Raza's mistake.



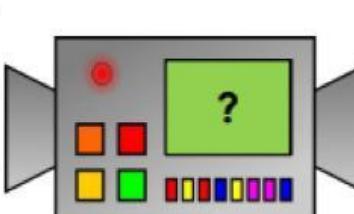
R

3a. Jim has put some terms into a function machine. What is the output if the input is 12?

Inputs:

3
7
9

Function:



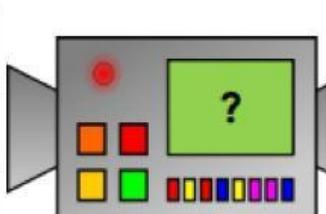
Outputs:

8
12
14

Inputs:

2
6
8

Function:



Outputs:

6
18
24



PS



PS

1a. Use the pictures to help you form the expression.

Input \rightarrow $\boxed{+ 3} \rightarrow$ Output



a



b



VF

1b. Use the pictures to help you form the expression.

Input \rightarrow $\boxed{\times 2} \rightarrow$ Output



x



y



VF

2a. Circle the function machine that does not show the correct expression.

p \rightarrow $\boxed{+ 3} \rightarrow p + 3$

q \rightarrow $\boxed{+ 4} \rightarrow q + 4$

r \rightarrow $\boxed{\times 2} \rightarrow r + 2$



VF

2b. Circle the function machine that does not show the correct expression.

a \rightarrow $\boxed{\times 4} \rightarrow 4a$

b \rightarrow $\boxed{+ 2} \rightarrow b + 2$

c \rightarrow $\boxed{\times 3} \rightarrow c3$



VF

3a. Find the missing functions.

a \rightarrow $\boxed{\quad}$ $\rightarrow a + 3$
 $\boxed{\times 3}$ $\boxed{+ 3}$

b \rightarrow $\boxed{\quad}$ $\rightarrow 2b$
 $\boxed{+ 2}$ $\boxed{\times 2}$



VF

3b. Find the missing functions.

x \rightarrow $\boxed{\quad}$ $\rightarrow 5x$
 $\boxed{+ 5}$ $\boxed{\times 5}$

y \rightarrow $\boxed{\quad}$ $\rightarrow y + 4$
 $\boxed{\times 4}$ $\boxed{+ 4}$



VF