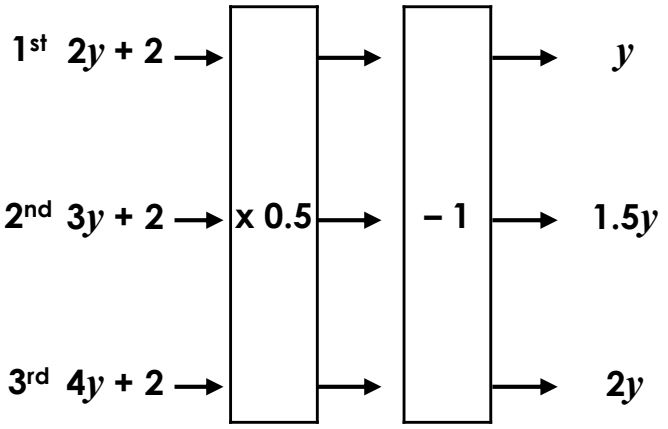
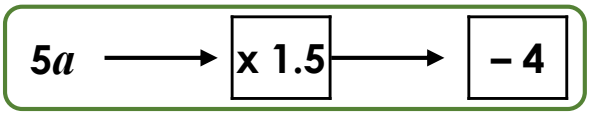
Forming Expressions

7a. What is the 16th expression in the sequence?



GD PS

8a. Nya has created a function machine.



She says,



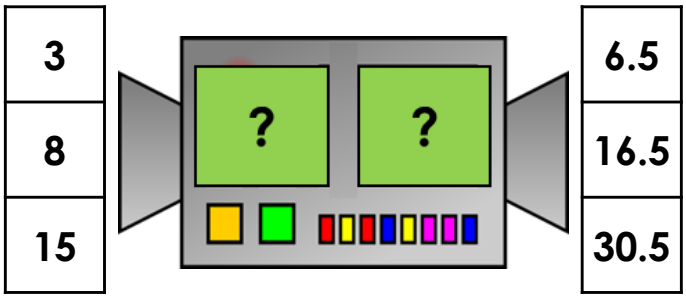
The expression formed from this function machine is $6.5a - 4$.

Explain Nya's mistake.

GD R

9a. Bill has put some terms into a function machine. What is the output if the input is 22?

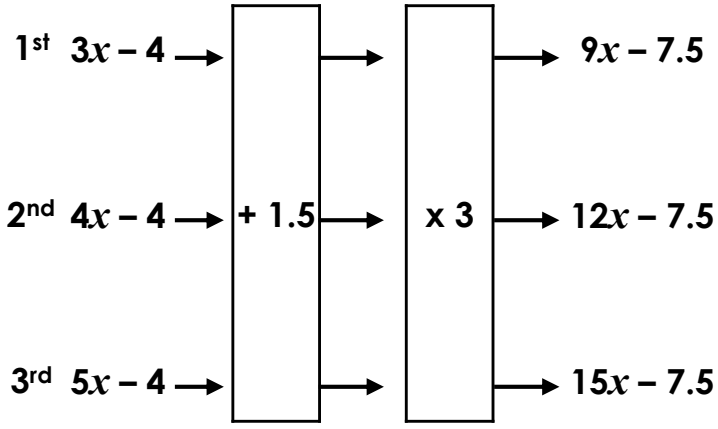
Inputs: Functions: Outputs:



GD PS

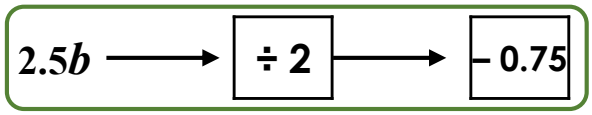
Forming Expressions

7b. What is the 21st expression in the sequence?



GD PS

8b. Kia has created a function machine.



He says,



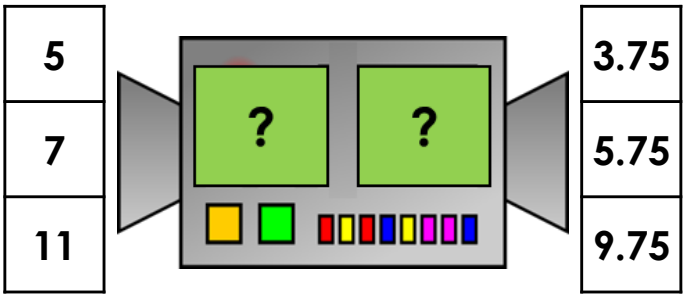
The expression formed from this function machine is $1.5b - 0.75$.

Explain Kia's mistake.

GD R

9b. Saul has put some terms into a function machine. What is the output if the input is 16?

Inputs: Functions: Outputs:



GD PS

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Reasoning and Problem Solving
Forming Expressions

Developing

1a. $2y + 8$

2a. Raza has multiplied instead of adding. Her expression should be $a + 5$.

3a. The function is + 5 so the output will be 17.

Expected

4a. $3y + 26$

5a. Jane has swapped the functions around but this changes the expression. Her expression should be $a - 3 \times 4$.

6a. The function is ÷ 4 so the output will be 12.

Greater Depth

7a. $8.5y$

8a. Nya has added the 5 and 1.5 together to make 6.5. She should have multiplied them together. Her expression should be $7.5a - 4$.

9a. The function is x 2 + 0.5 so the output will be 44.5.

Reasoning and Problem Solving
Forming Expressions

Developing

1b. $7y + 3$

2b. Leon has forgotten that when multiplying in algebra we write the expression $2b$.

3b. The function is x 3 so the output will be 27.

Expected

4b. $2x + 44$

5b. Peri has forgotten that when multiplying in algebra we write the expression $5b$. His expression should be $5b + 2$.

6b. The function is x 6 so the output will be 72.

Greater Depth

7b. $69x - 7.5$

8b. Kia has tried to divide 2.5 by 2 to combine the steps but his dividing is inaccurate. His expression should be $1.25b - 0.75$.

9b. The function is – 2 + 0.75 so the output will be 14.75.

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