Week 15

Monday 29th June 2020

Year 6 Two-Step Rule - Varied Fluency

First, review the basics of Algebra using the link:

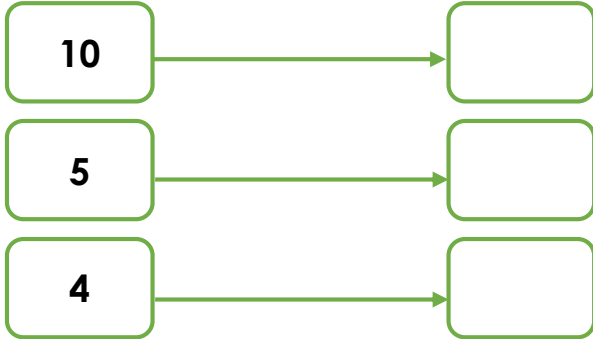https://www.youtube.com/watch?v=Qa-MCLDrSII

*Remember to check at the end for the challenge

1a. Write the outputs for the algebraic function.

$2a - 6$

10 →

5 →

4 →

6 VF

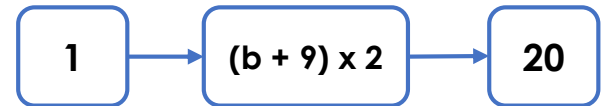**1b. Write the outputs for the algebraic function.**

$(b + 4) \times 2$

3 →

8 →

2 →
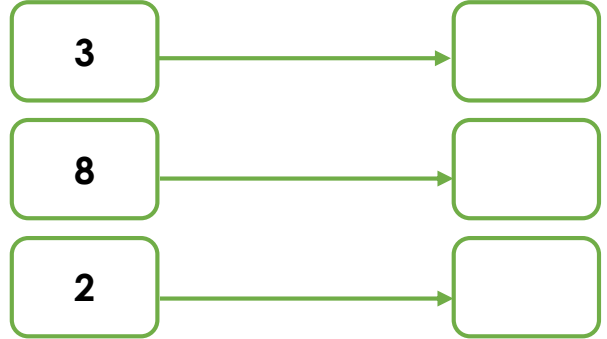
6 VF

2a. True or false?

12 → $2a - 2$ → 21
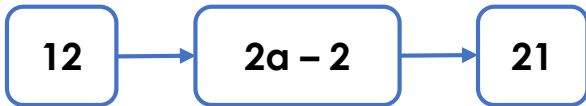
6 VF

2b. True or false?

1 → $(b + 9) \times 2$ → 20

6 VF

3a. Use the function to match up the inputs and outputs.

$\times 2 + 10$

1	32
11	12
7	24

6 VF

3b. Use the function to match up the inputs and outputs.

$\times 2 - 4$

8	2
3	18
11	12

6 VF

4a. What is the algebraic rule for this function machine?

12			27
9	$\times 2$ → ? →	21
10			23
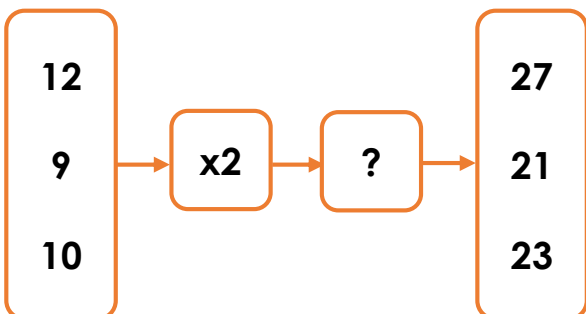
6 VF

4b. What is the algebraic rule for this function machine?

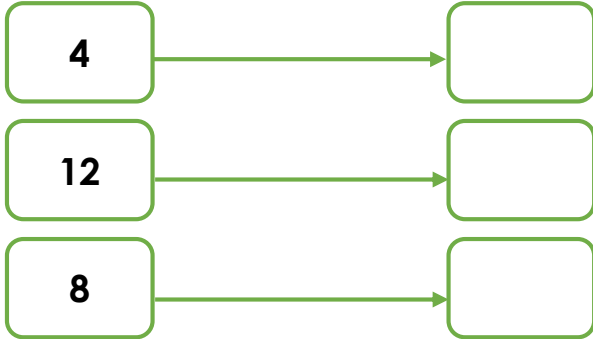| 15 | | | 22 |
| 8 | $- 4$ → ? → | 8 |
| 14 | | | 20 |
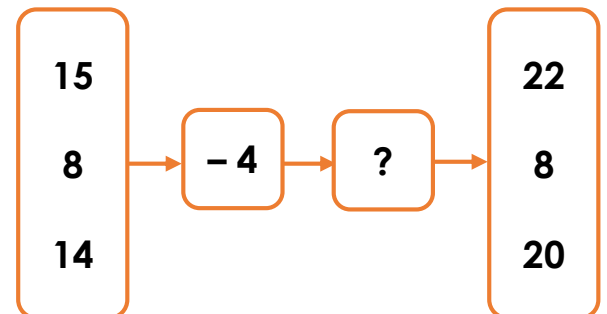
6 VF

Find a Rule – Two Step

5a. Write the outputs for the algebraic function.

$(a + 4) \div 2$

4 →

12 →

8 →

6 VF

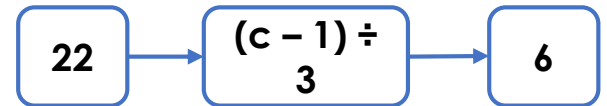## 5b. Write the outputs for the algebraic function.

$3b - 5$

7 →

3 →

11 →
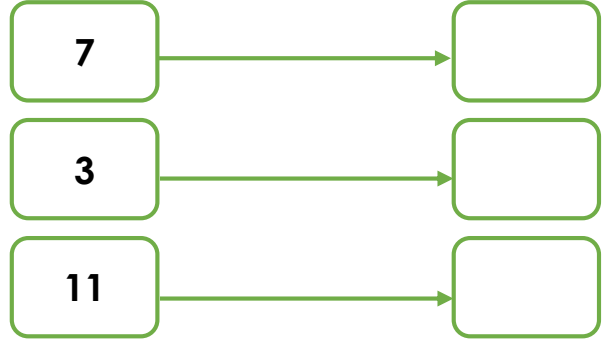
6 VF

6a. True or false?

3 → 4a + 3 → 15
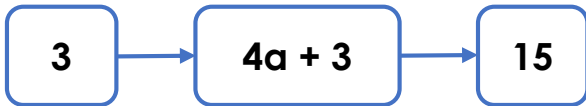
6 VF

6b. True or false?

22 → $(c - 1) \div 3$ → 6

6 VF

7a. Use the function to match up the inputs and outputs.

$3x + 5$

4	32
9	41
12	17

6 VF

7b. Use the function to match up the inputs and outputs.

$\div 2 - 4$

40	22
52	16
12	2

6 VF

8a. What is the algebraic rule for this function machine?

3 → +4 → ? → 14
5 → → → 18
10 → → → 28
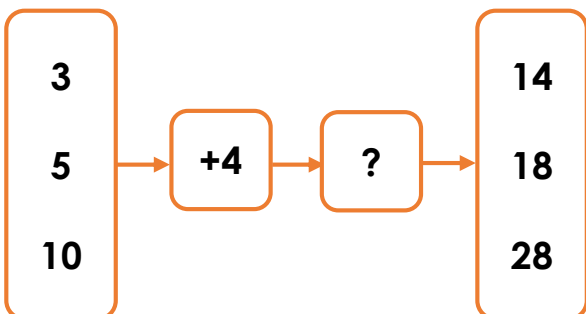
6 VF

8b. What is the algebraic rule for this function machine?

7 → x4 → ? → 22
12 → → → 42
4 → → → 10

6 VF
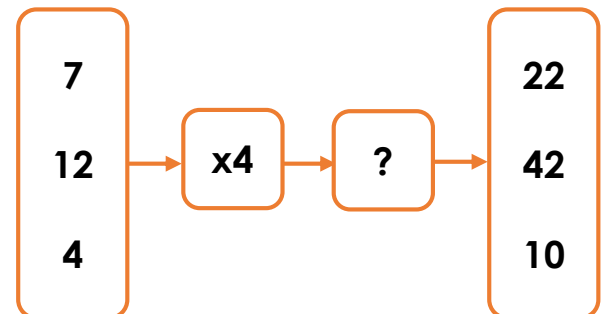
9a. Write the outputs for the algebraic function.

$$3a - 11$$

2	→	
12	→	
3	→	

6 VF
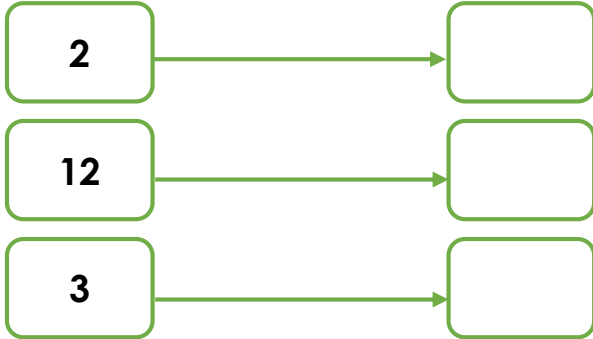
9b. Write the outputs for the algebraic function.

$$(b + 4) \div 2$$

11	→	
52	→	
2.5	→	
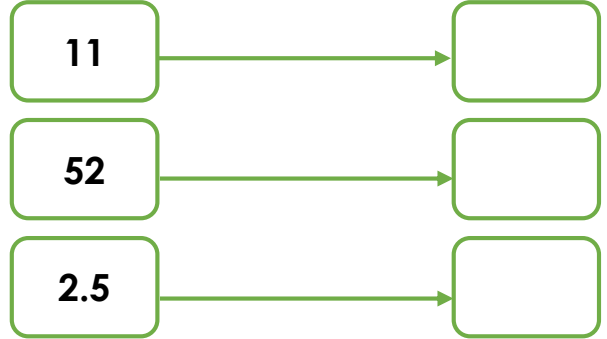
6 VF

10a. True or false?

3 → $4a - 20$ → - 8

6 VF

10b. True or false?

0.6 → $10b + 1$ → 61

6 VF

11a. Use the function to match up the inputs and outputs.

$$\div 4 - 20$$

16	-10
40	-9
44	-16

6 VF

11b. Use the function to match up the inputs and outputs.

$$x\ 12 - 8$$

4.5	100
9	46
11.5	130

6 VF

12a. What is the algebraic rule for this function machine?

-3			30
3	+9	?	60
-6			15
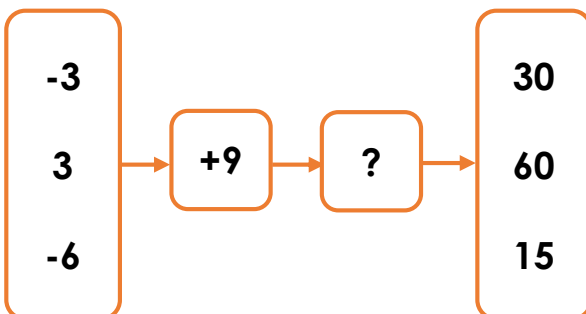
6 VF

12b. What is the algebraic rule for this function machine?

95			45
50	− 5	?	22.5
35			15
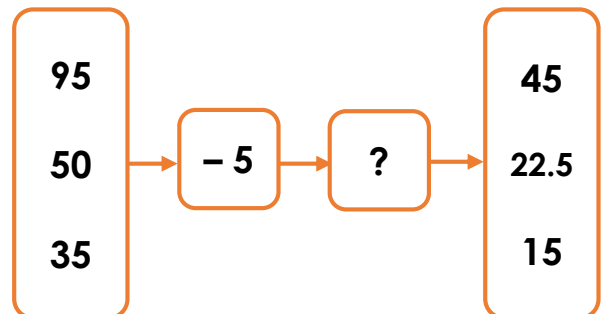
6 VF

Challenge

Write the 2 possible algebraic equations for each of these functions.

p is 4 more than q

_____

_____

b is 12 less than c

_____

_____