Week 15

Wednesday 1st July 2020

Year 6 Use an Algebraic Rule - Varied Fluency
Review how to solve an Algebraic expression when given the value of the variable using the link:
https://www.youtube.com/watch?v=DOKiZfX9ePk

Use An Algebraic Rule

1a. Calculate the output for the following rules where a = 12.

(a + 10) x 2

2a – 4

(a – 3) x 2

Use An Algebraic Rule

1b. Calculate the output for the following rules where a = 7.

(2a + a) – 2

(56 + 10) – a

35 + a

2a. Match the output to the correct expression, where a = 10.

45 – 2a   62

(a + 5) x 2   25

72 – a   30

2b. Match the output to the correct expression, where a = 2.

9 + (a – 1)   10

100 – 2a   14

(a + 5) x 2   96

3a. True or false?

11 → 2a + (15 – a) → 26

3b. True or false?

15 → (50 – a) – 10 → 40
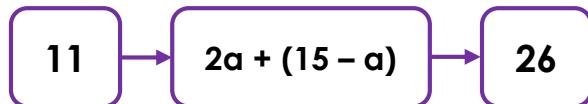
4a. Toby is using the expression 5 + 2a.

Calculate the value of a when his outputs are;

5 + 2a

→ 17

→ 27

→ 11
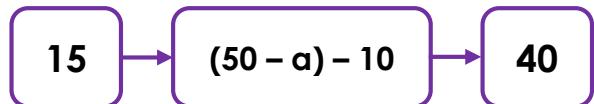
4b. Tim is using the expression (a – 2) x 2.

Calculate the value of a when his outputs are;

(a – 2) x 2

→ 16

→ 24

→ 10
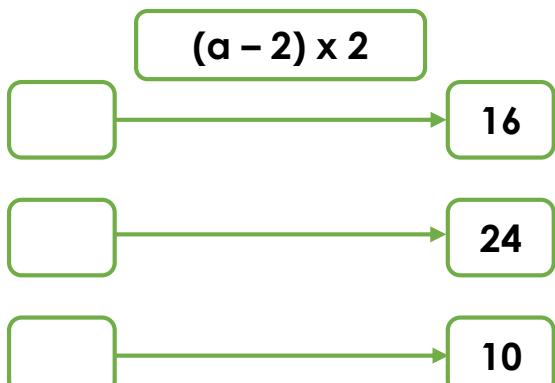
Use An Algebraic Rule

5a. Calculate the output for the following rules where a = 5.

2a + 5	
(a + 3) ÷ 4	
4a – 15	

6 VF

Use An Algebraic Rule

5b. Calculate the output for the following rules where a = 9.

$a^2 - 7$	
(10a – 6) ÷ 2	
12 + 3a	

6 VF

6a. Match the output to the correct expression, where a = 10.

3a – 5	3
(a – 4) ÷ 2	23
2a + 3	25

6 VF

6b. Match the output to the correct expression, where a = 7.

25 + 5a	18
(a ÷ 7) + 8	9
(a – 4) x 6	60

6 VF

7a. True or false?

12 → (a – 8) x 10 → 40
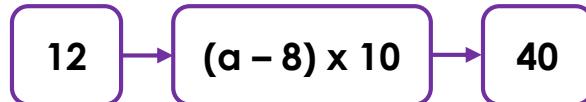
6 VF

7b. True or false?

5 → $a^2 - 10$ → 0
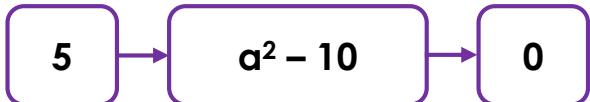
6 VF

8a. Ivy is using the expression (a – 1) ÷ 3.

Calculate the value of a when her outputs are;

(a – 1) ÷ 3

	→ 3
	→ 5
	→ 10

6 VF

8b. Jo is using the expression 8a – (a ÷ 2).

Calculate the value of a when her outputs are;

8a – (a ÷ 2)

	→ 75
	→ 90
	→ 30

6 VF

Use An Algebraic Rule

9a. Calculate the output for the following rules where a = 12.

$$\frac{1}{2}a + (25 - a)$$

$$(a^2 - 10) \div 10$$

$$3a - (2a + 20)$$

6   VF

Use An Algebraic Rule

9b. Calculate the output for the following rules where a = 5.

$$a^2 + (10a - 100)$$

$$(5a - 6) \div 10$$

$$9a - (10a + 7)$$

6   VF

10a. Match the output to the correct expression, where a = 2.5.

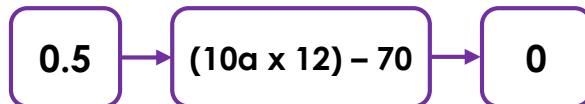| $3a - (5 + 2a)$ | 0 |
| $\frac{1}{2}(4a \times 2)$ | 10 |
| $10a - (5a \times 2)$ | - 2.5 |

6   VF

10b. Match the output to the correct expression, where a = 12.

$5a \div (a - 2)$	6
$(2a \div 4) - 12$	63
$(2a + 7.5) \times 2$	- 6

6   VF

11a. True or false?

0.5 → $(10a \times 12) - 70$ → 0

6   VF

11b. True or false?

2 → $(a^3 - 5) - 12$ → - 10

6   VF

12a. Will is using the expression $(a^2 + 10) \div 10$.

Calculate the value of a when his outputs are;

$$(a^2 + 10) \div 10$$

	1
	9.1
	4.6
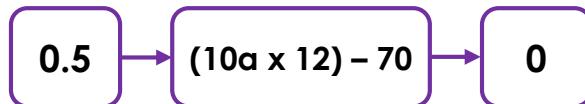
6   VF

12b. Harry is using the expression $(\frac{1}{2}a + a) \times 2$.

Calculate the value of a when his outputs are;

$$(\frac{1}{2}a + a) \times 2$$

	27
	60
	9

6   VF