

# Week 16

## Friday 10th July 2020

### Year 6 Use One Step Equations - Varied Fluency and Reasoning & Problem Solving

\*Today's lesson has both **Varied Fluency and Reasoning & Problem Solving**. Please complete both sheets (**VF and RPS**) as follows:

- **Squares** complete **D**
- **Rectangles & Triangles** complete **E**
- **Circles** complete **GD**

\*Review how to solve a one step equation using the link:  
[https://www.youtube.com/watch?v=L0\\_K89UJfJY&t=343s](https://www.youtube.com/watch?v=L0_K89UJfJY&t=343s)

## One Step Equations

## One Step Equations

1a. True or false?

The value of  $b$  is the same in both equations.

$$2b = 20$$

$$25 - 15 = b$$



6 VF

1b. True or false?

The value of  $m$  is the same in both equations.

$$m - 6 = 6$$

$$2 + m = 14$$



6 VF

2a. Which concrete representation matches the equation  $n + 1$ ?



6 VF

2b. Which concrete representation matches the equation  $c + c$ ?



6 VF

3a. Compare the value of  $b$  in each equation using  $<$ ,  $>$  or  $=$ .

$$2b = 10 \quad \square \quad b + 9 = 11 \quad \square \quad 26 - b = 19$$



6 VF

3b. Compare the value of  $a$  in each equation using  $<$ ,  $>$  or  $=$ .

$$a \times a = 36 \quad \square \quad a - 10 = 9 \quad \square \quad 4 \times a = 16$$



6 VF

4a. What numbers would balance these equations?

a.  $p + 1 = 30$

b.  $d - 4 = 14$

c.  $a + a = 32$



6 VF

4b. What numbers would balance these equations?

a.  $b - 11 = 0$

b.  $c + c + c = 12$

c.  $2 + a = 7$

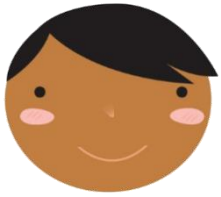


6 VF

## One Step Equations

1a. Jonah is solving the equation  $2n = 20$ .

Jonah says:



$n = 18$  because  
 $2 + 18 = 20$ .

Is he correct? Explain your answer.

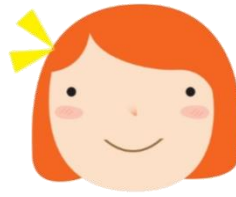


6 R

## One Step Equations

1b. Amy-Jo is solving the equation  $2c = 6$ .

Amy-Jo says:



$c = 8$  because  
 $2 - 8 = 6$ .

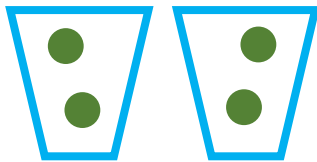
Is she correct? Explain your answer.



6 R

2a. Greta has created a concrete representation for the following equation:

$$2n = 10$$



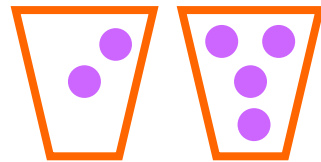
Is Greta correct? Convince me!



6 R

2b. Brayson has created a concrete representation for the following equation:

$$12 = 2n$$



Is Brayson correct? Convince me!



6 R

3a. Create three different equations that will balance the scale when  $v = 6$ .



6 PS

3b. Create three different equations that will balance the scale when  $n = 4$ .



6 PS

# One Step Equations

# One Step Equations

5a. True or false?

The value of  $z$  is the same in both equations.

$$5z = 1$$

$$20 \div 100 = z$$



6 VF

5b. True or false?

The value of  $x$  is the same in both equations.

$$x + 3 = 25$$

$$11^2 = x$$



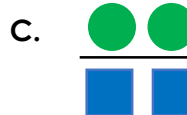
6 VF

6a. Which concrete representation matches the equation  $2 + c$ ?



6 VF

6b. Which concrete representation matches the equation  $n + 4$ ?



6 VF

7a. Compare the value of  $a$  in each equation using  $<$ ,  $>$  or  $=$ .

$6a = 30$    $a - 4 = 10$    $3 + a = 17$



6 VF

7b. Compare the value of  $b$  in each equation using  $<$ ,  $>$  or  $=$ .

$5b = 6$    $b - 5 = 9$    $4 + b = 18$



6 VF

8a. What numbers would balance these equations?

a.  $c \times 5 = 35$

b.  $42 - a = 24.5$

c.  $9b = 36$



6 VF

8b. What numbers would balance these equations?

a.  $m \times 7 = 56$

b.  $3n = 120$

c.  $6 + d = 28.5$



6 VF

## One Step Equations

4a. Evan is solving the equation  $c + 9 = 36$ .

Evan says:



$c = 45$  because  
 $36 + 9 = 45$ .

Is he correct? Explain your answer.

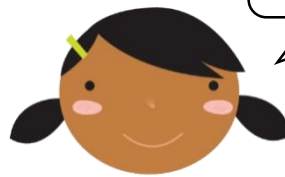


6 R

## One Step Equations

4b. Maddie is solving the equation  $3f = 30$ .

Maddie says:



$f = 90$  because  
 $3 \times 30 = 90$ .

Is she correct? Explain your answer.



6 R

5a. Aurora has created a concrete representation for the following equation:

$$3b = 15$$



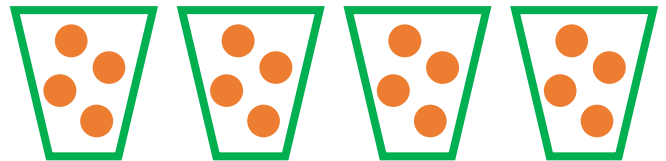
Is Aurora correct? Convince me!



6 R

5b. Jack has created a concrete representation for the following equation:

$$3n = 12$$



Is Jack correct? Convince me!



6 R

6a. Create three different equations that will balance the scale when  $r = 8$ .



6 PS

6b. Create three different equations that will balance the scale when  $n = 0.5$ .



6 PS

## One Step Equations

## One Step Equations

9a. True or false?

The value of  $t$  is the same in both equations.

$$t^2 = 25$$

$$25 \div 10 = t$$



6 VF

9b. True or false?

The value of  $y$  is the same in both equations.

$$y \times 0.5 = 25$$

$$-50 + 100 = y$$



6 VF

10a. Which concrete representation matches the equation  $2m + 0.5$ ?



6 VF

10b. Which concrete representation matches the equation  $n \div 1$ ?



6 VF

11a. Compare the value of  $c$  in each equation using  $<$ ,  $>$  or  $=$ .

$$c^2 = 169 \quad \square \quad c - 0.5 = 2 \quad \square \quad c - 10 = -7.5$$



6 VF

11b. Compare the value of  $d$  in each equation using  $<$ ,  $>$  or  $=$ .

$$d \times 8 = 72 \quad \square \quad -5 + d = 2 \quad \square \quad d \div 2 = 3.5$$



6 VF

12a. What numbers would balance these equations?

a.  $c \div 8 = 6.5$

b.  $b = 81 \div b$

c.  $7n = 1.4$



6 VF

12b. What numbers would balance these equations?

a.  $4n = 22$

b.  $r - 1.5 = -1$

c.  $c = 49 \div c$



6 VF

## One Step Equations

7a. Graham is solving the equation  $d^2 = 1$ .

Graham says:



$d = 0.5$  because  
 $0.5 + 0.5 = 1$ .

Is he correct? Explain your answer.



6 R

## One Step Equations

7b. Nell is solving the equation  $b - 7 = -4$ .

Nell says:



$b = 11$  because  
 $11 - 7 = 4$ .

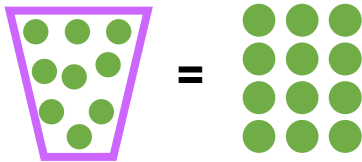
Is she correct? Explain your answer.



6 R

8a. Amina has created a concrete representation for the following equation:

$$b + 3 = 12$$



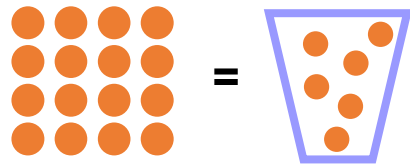
Is Amina correct? Convince me!



6 R

8b. Brynn has created a concrete representation for the following equation:

$$16 = x + 10$$



Is Brynn correct? Convince me!



6 R

9a. Create three different equations that will balance the scale when  $d = 7$ .



6 PS

9b. Create three different equations that will balance the scale when  $c = -5$ .



6 PS