

Monday 22nd June 2020 / 29th June 2020

WALT Solve 2-step equations

Good morning Year 6. If you are in school, practise a times table you don't know. If you're at home, log on to ttrackstars and challenge yourself!

ROCKSTARS! (5 minutes)

<https://play.ttrackstars.com/auth/school>



All video content, questions and answers are from whiterosemaths.com

This week, we're going to continue our online learning on the White Rose website. The topic this week will be **algebra** and then move onto **measurement**.

Video

Today the learning is about **solving 2-step equations**.

Can you remember what an equation is? Have a think about how you would solve this problem?

$2y = 14$. What is the value of y ?

That's right! 2 lots of $y = 14$. So half of $14 = y$. $y=7$.

Click on the link below to learn about 2 step equations. Once you've watched the video, answer the questions on this sheet.

<https://vimeo.com/428002477>

A screenshot of a video player showing a math problem. The problem involves Mo and Tommy buying chews and drinks. Mo pays £1.20 for 4 chews and a drink. Tommy pays 20 p for a drink. The video shows a diagram with 4 chews and a drink for £1.00, and another diagram with 4 chews and a drink for £1.20. The equations shown are $4 \text{ chews} + 20 \text{ p} = \text{£}1.20$ and $4 \text{ chews} = \text{£}1.00$. The solution shows that 1 chew = 25 p.

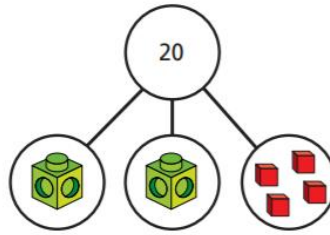
Children and Parents/Carers

If you have any trouble accessing the link or lessons online, please let me know on our padlet page and I will do my best to help:


<https://padlet.com/Year6CrownLane/1860jynql0c8j7wa>

Questions

- 1 Here is a part-whole model.

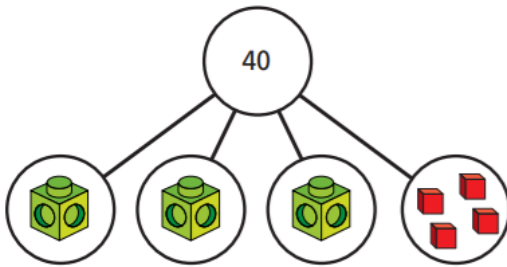


- a) Write an equation for the part-whole model.

- b) Solve the equation to work out the value of 

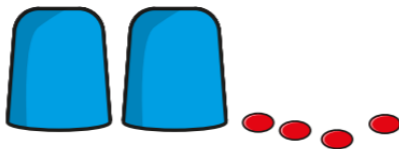
 =

- 2 If each multilink cube represents x , form and solve an equation to find the value x .



$x =$

- 3 There is the same number of counters under each cup.
There are 16 counters in total.



- a) Use y to represent the number of counters under each cup.

Write an equation in terms of y .

- b) Solve the equation to find the value of y .

$y =$

- c) How many counters are under each cup?

Top Tip!

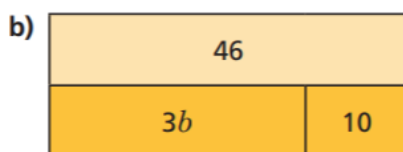
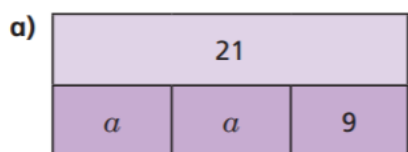
If you are struggling to work this question out, use pasta or rice to represent counters and some cups.

Count out 16 bits of pasta, then put 4 of those outside the cups. Then share out the remaining bits of pasta in between the cups!

Now represent it as an equation. The number underneath each cup is 'y'.

4 Write an algebraic equation to represent each bar model.

Find the values of a and b .



$a =$

$b =$

5 Solve the equations.

a) $5x + 1 = 31$

d) $9 = 2y + 8$

$x =$

$y =$

b) $3x - 3 = 9$

e) $10g - 2 = 46$

$x =$

$g =$

c) $4p - 11 = 3$

f) $4 + 3y = 28$

$p =$

$y =$

Top Tip!

It really helps to work backwards when solving this type of problem.

Start with the biggest number, then subtract the number you can see.

Then divide the remaining number to find the value of the letter.

Extension

6 Dani thinks of a number.

She doubles it and adds 3

She gets the answer 15

a) Write an equation to represent Dani's problem.

b) Solve the equation to find her number.

Solve two-step equations

- 1 Here is a part-whole model.



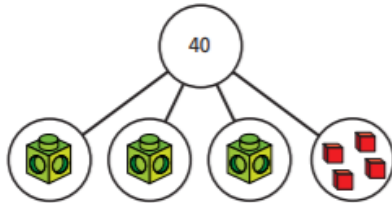
- a) Write an equation for the part-whole model.

$2a + 4 = 20$

- b) Solve the equation to work out the value of

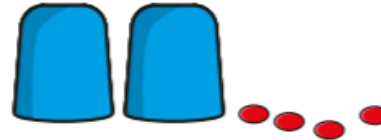
= 8

- 2 If each multilink cube represents x , form and solve an equation to find the value x .



$x = 12$

- 3 There is the same number of counters under each cup.
There are 16 counters in total.



- a) Use y to represent the number of counters under each cup.

Write an equation in terms of y .

$2y + 4 = 16$

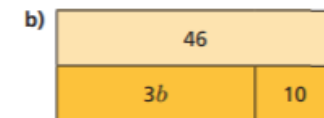
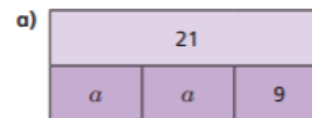
- b) Solve the equation to find the value of y .

$y = 6$

- c) How many counters are under each cup?

6

- 4 Write an algebraic equation to represent each bar model.
Find the values of a and b .



$a = 6$

$b = 12$



5

Solve the equations.

a) $5x + 1 = 31$

$x = 6$

d) $9 = 2y + 8$

$y = 0.5$

b) $3x - 3 = 9$

$x = 4$

e) $10g - 2 = 46$

$g = 4.8$

c) $4p - 11 = 3$

$p = 3.5$

f) $4 + 3y = 28$

$y = 8$

Extension

6

Dani thinks of a number.

She doubles it and adds 3

She gets the answer 15

a) Write an equation to represent Dani's problem.

$$2x + 3 = 15$$

b) Solve the equation to find her number.

6

