

New Style Of Numeracy Starter

This is the new style of numeracy starter I will be using for the foreseeable future, this may be tweaked for the first few weeks. The whole point of this new style is to train the students how to revise Maths and to try and make them more independent outside of the classroom. If you have any questions please don't hesitate to ask.

This week I would like to challenge the students by giving them an applied ratio question to follow what we have been doing in the previous weeks.

Ratio Challenge Question

Gareth and John share a box of chocolates. Gareth gets $\frac{3}{5}$ of the box. The ratio of white to milk to dark chocolates in John's share is 1:2:1, he gets 4 white and dark chocolates in total. Gareth gets twice as many white chocolates as John and he has an equal number of dark and milk. How many of each type of chocolate were in the box?

Getting The Answer

Gareth and John share a box of chocolates. Gareth gets $\frac{3}{5}$ of the box.

The ratio of white to milk to dark chocolates in John's share is 1:2:1, he gets 4 white and dark chocolates in total. Gareth gets twice as many white chocolates as John and he has an equal number of dark and milk.

How many of each type of chocolate were in the box?

Hint 1: Show that Gareth has $\frac{3}{5}$ and John has $\frac{2}{5}$ of the box using a bar model.

Hint 2: Show the information about John's ratio in a bar below, this should be the same length of John's bar above.

Hint 3: If John gets 4 white and dark chocolates in total, how much is each box actually worth in terms of chocolates?

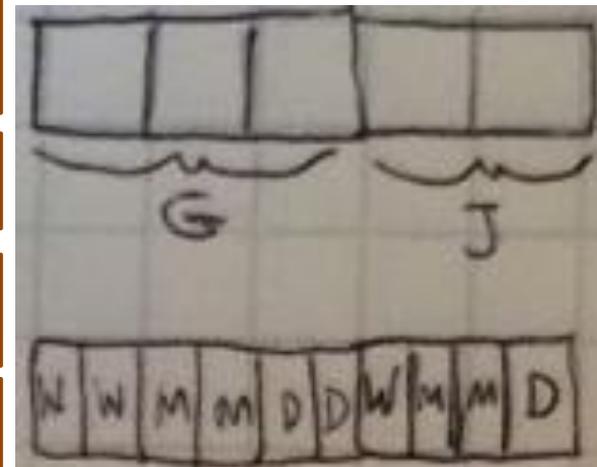
Hint 4: Now we need to represent Gareth's ratio in a bar next to John's. We know he gets 4 white chocolates (how many BOXES is this?) but how many chocolates does he get altogether?

Hint 5: John gets $\frac{2}{5}$ which is worth how many boxes? So how many boxes would Gareth's ratio be split into?

Hint 6: Gareth gets an equal amount of milk and dark, how many boxes are left over to allocate to each?

Hint 7: How many of each chocolate was in the box? Don't forget each box is worth 2 chocolates!

Overall there are 20 chocolates, there are 6 white, 8 milk and 6 dark.



Think This Is Something You Will Forget?

You should make a revision aid every time you revise, this way you have something you can keep referring back to. If you revise something one day then look over it for 10 minutes the next day and 5 minutes the day after that you WILL retain more of the information. Why put hours of work in then waste those hours by never re-visiting areas?

A good revision tool for this technique would be a fully worked example you have annotated so when you read it back it still makes sense.

Need Extra Practice?

The links below contain revision and practice for ratio:

<http://www.bbc.co.uk/bitesize/ks3/maths/number/ratio/revision/1/>

<http://www.bbc.co.uk/education/guides/znnycdm/revision>

<http://www.mathsdoctor.co.uk/revision-help/gcse/ratio-proportion-rates/ratio-problems/>

<https://www.mathsisfun.com/numbers/ratio.html>