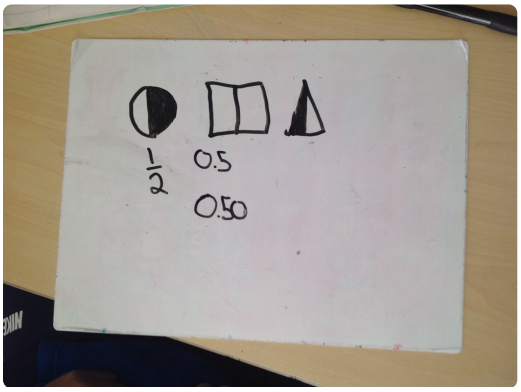
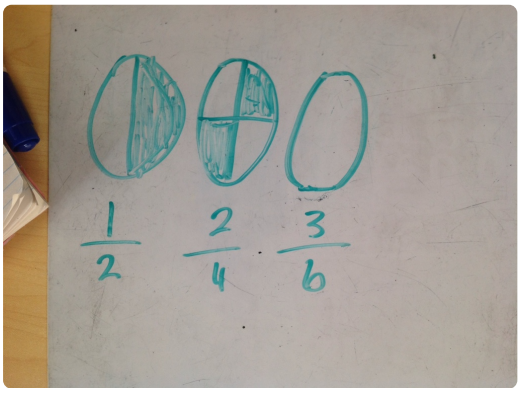
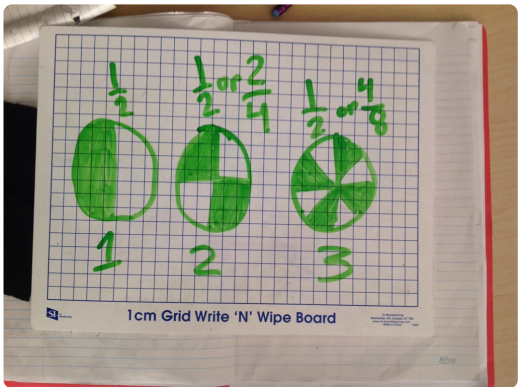
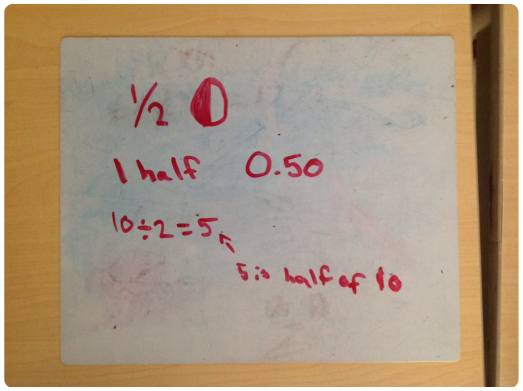
Learning Goal
We are learning to connect decimals and fractions, and that a decimal can be represented in more than one way.

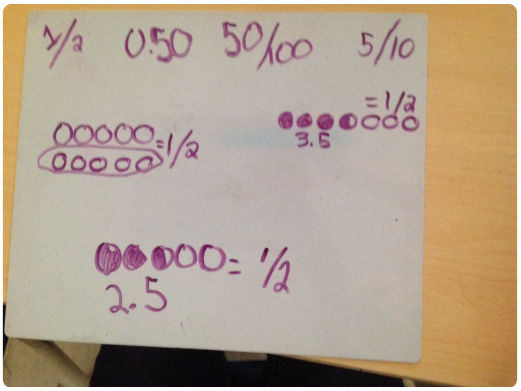
Minds On
On the whiteboard, ask students to represent 1/2 in three different ways.

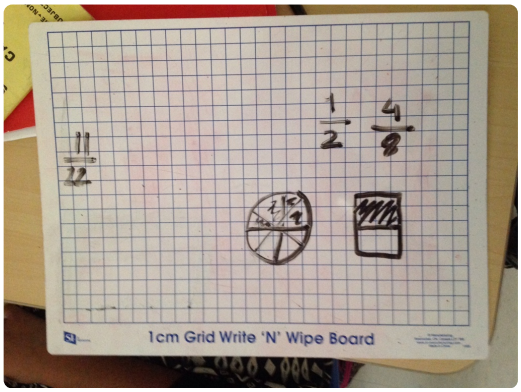






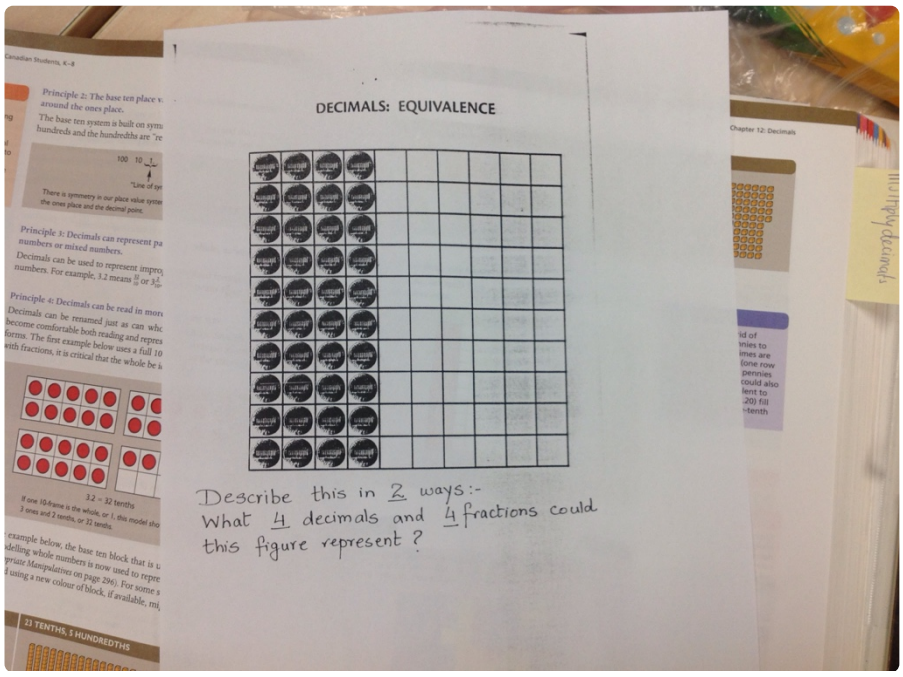


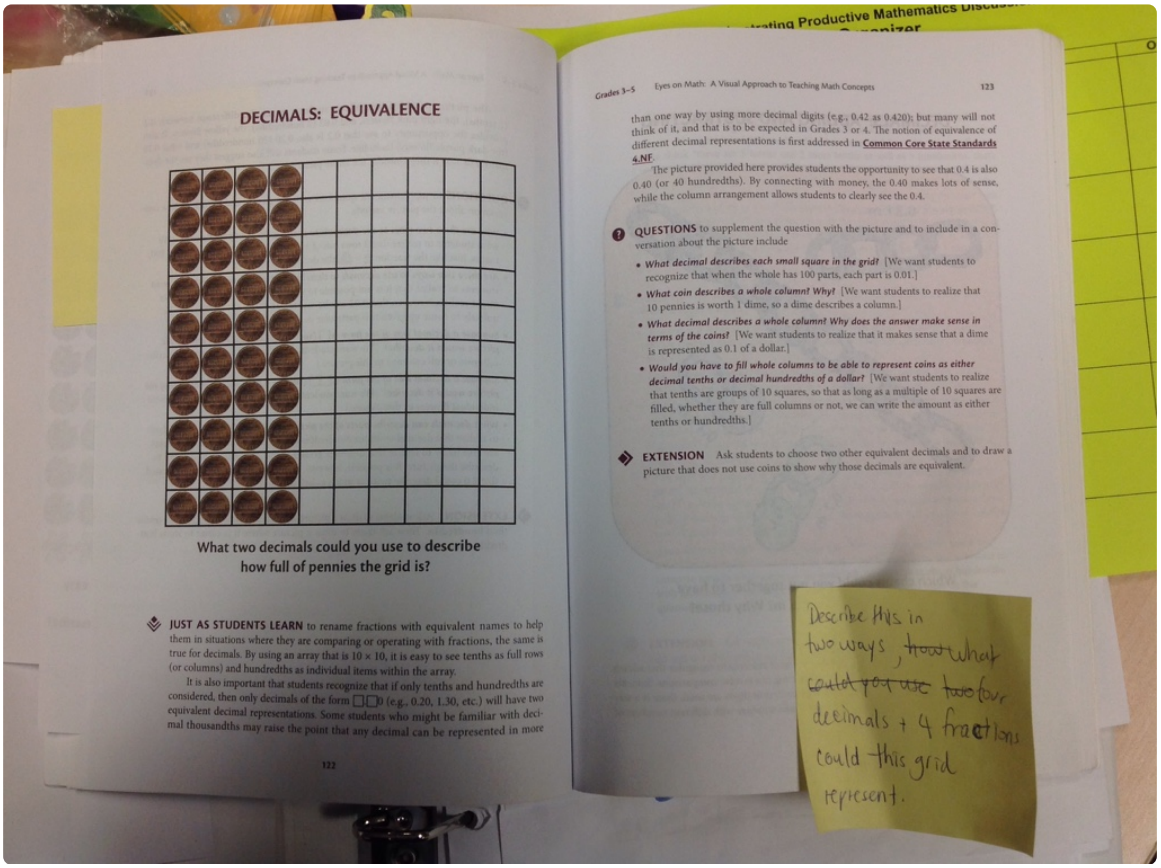


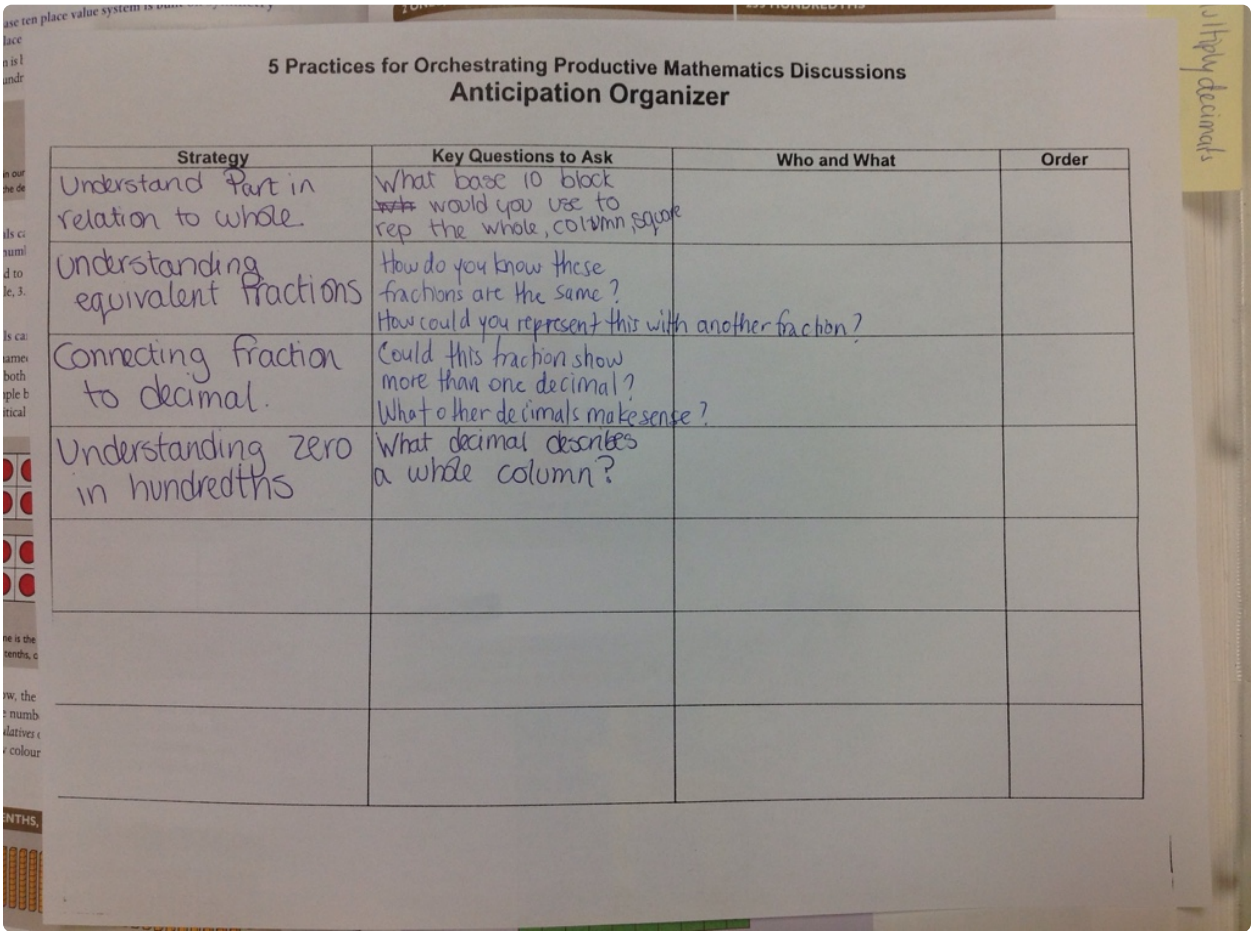


I know one whole is one, so half of that is 0.5

Working on it
Eyes on Math
problem







5 Practices for Orchestrating Productive Mathematics Discussions

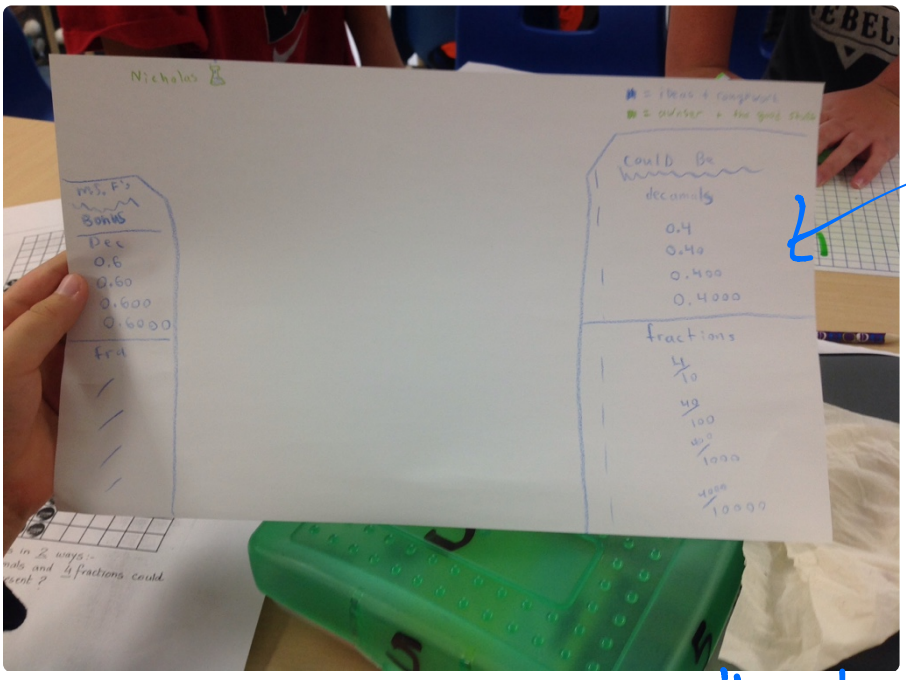
Anticipation Organizer

Strategy	Key Questions to Ask	Who and What	Order
Understand Part in relation to whole.	What base 10 block ~~with~~ would you use to rep the whole, column, square		
Understanding equivalent fractions	How do you know these fractions are the same? How could you represent this with another fraction?		
Connecting fraction to decimal.	Could this fraction show more than one decimal? What other decimals make sense?		
Understanding zero in hundredths	What decimal describes a whole column?		

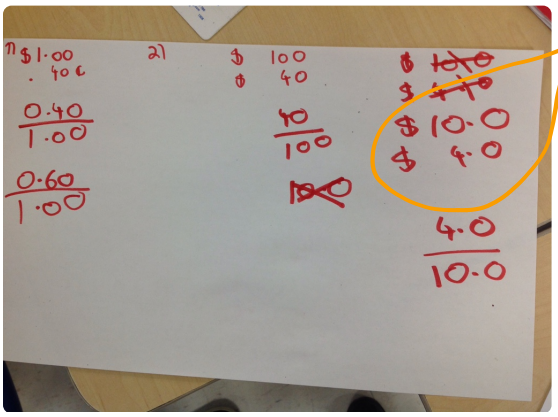
Additional questions:

-Now that you have thought about the pennies, what could the white space represent?

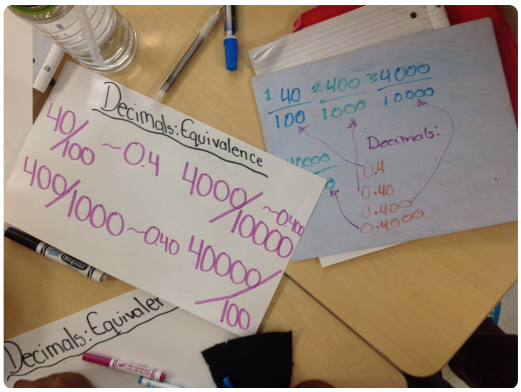
-How would you represent that with money?



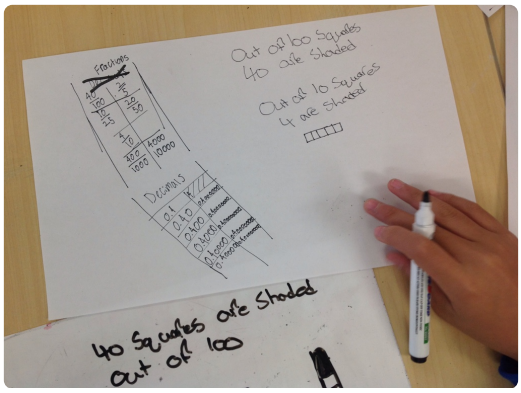
Which fractions show which decimals?

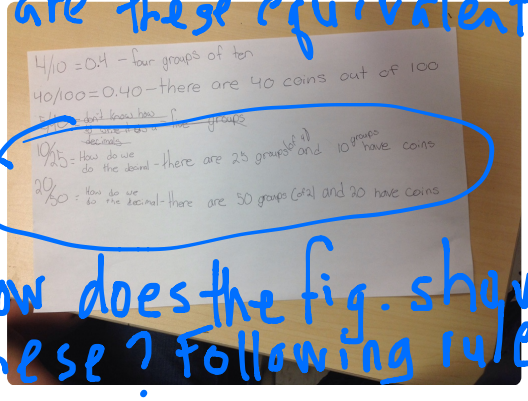


How does the figure show this?



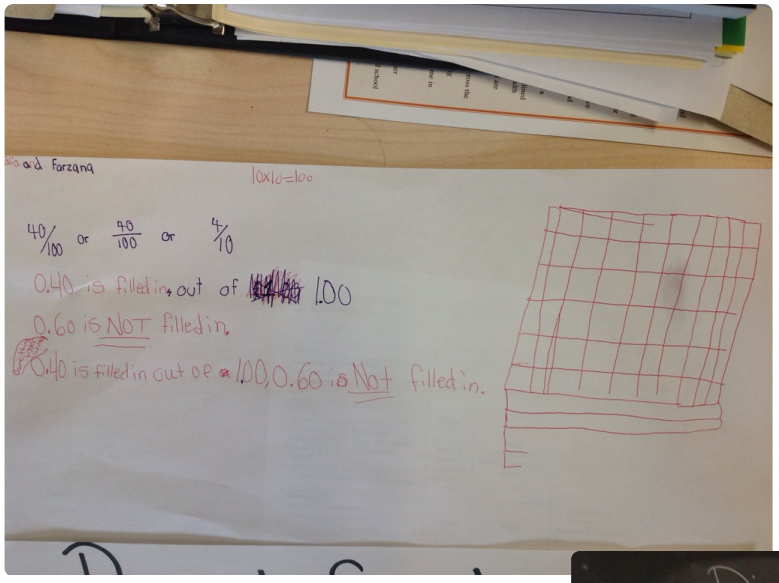
How are these equivalent?





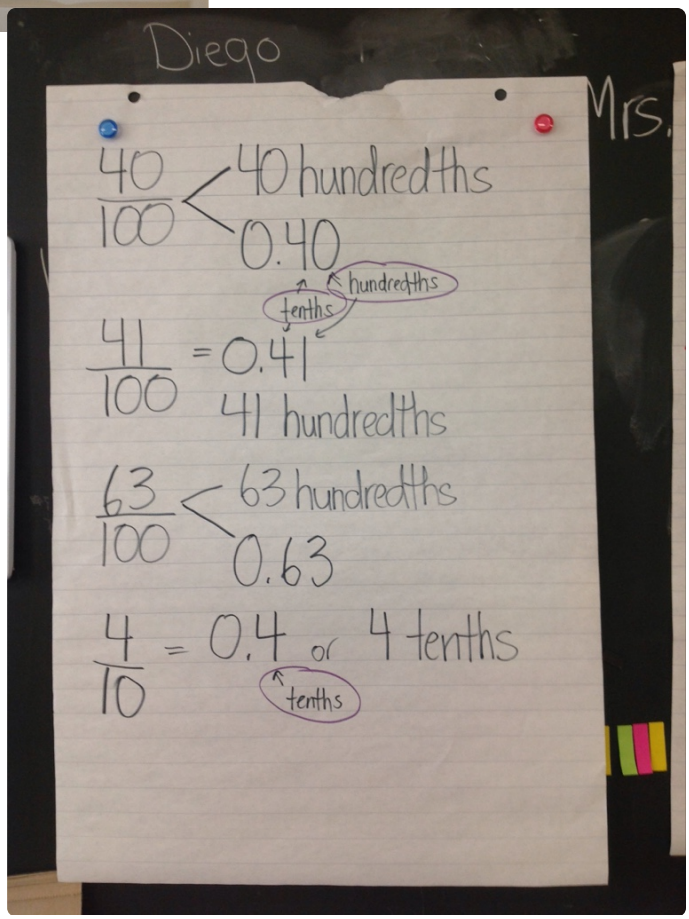
How does the fig. show these? Following rules?

The Debrief



What is the connection between the fraction and the decimal, how do you know they are the?

Students shared their fraction of 40/100 and connected it to the decimal .40



-modelled with base ten
-compared the whole to one dollar, 1.00, and the pennies to 40 cents, or .40
-used a comparison of 41 cents, if there were 41 pennies on the grid, what would that fraction be, and decimal?
-discussed naming each place value, tenths and hundredths
-thought about 63 pennies on the grid and how the represent them with a fraction and decimal

-next, tackled 4/10 as representing the pennies on the grid. Modelled 10 units as a rod, or a tenth, and showed how there were four rods, out of a possible ten, on the grid

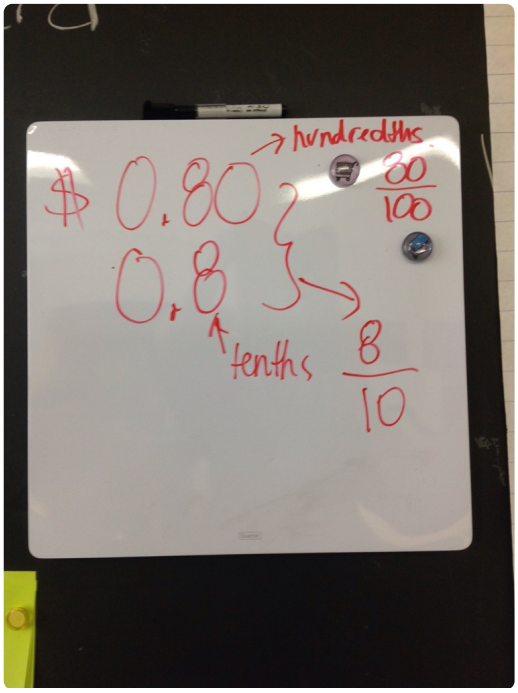
-asked how students could show that as a decimal

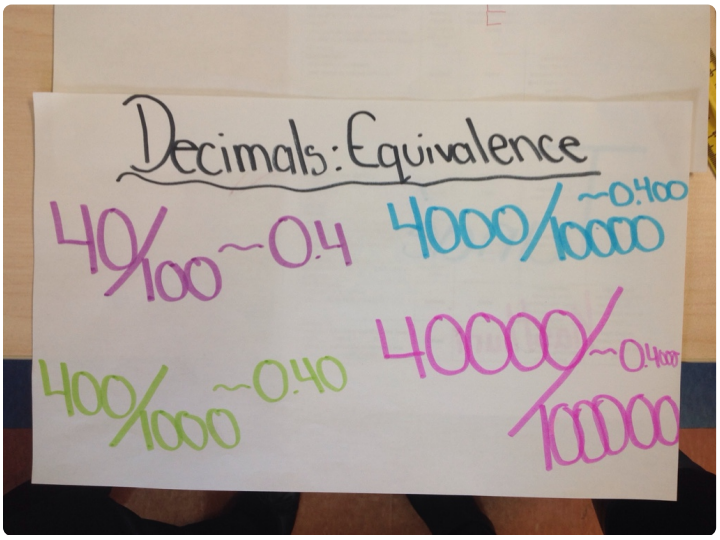
- many thought that would be .4, and gave relaxing why (the four is in the tenths place)

How are .40 and .4 the same and different?

If I went to Walmart and chocolate bars are 80 cents, on sale, how would they write that on a sign?

Why would they include that zero (in the hundredths place)?





Could ask students if they agree with these fraction and decimal relationships...why or why not?