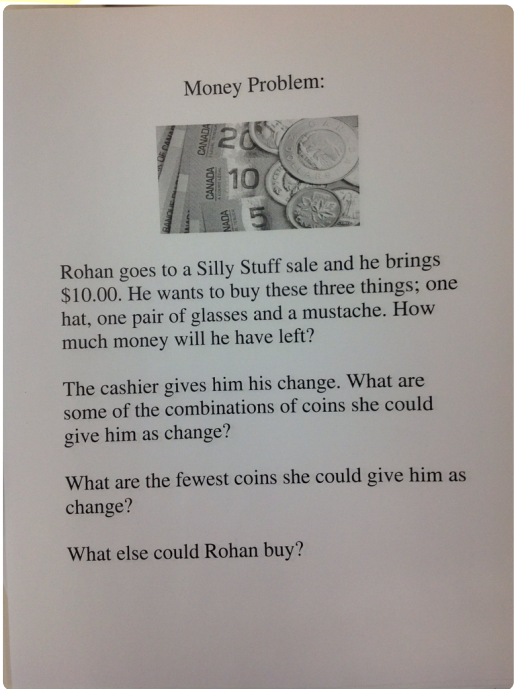
Grade 3 Number Sense
You can add or subtract in parts
Relating coins to friendly numbers
There are many ways to combine coins to represent the same amount

Rohan goes to Silly Stuff Sale and he brings $10.00. He wants to buy these three things, how much money will he have left?
The cashier gives him his change. What are the some of the combinations of coins she could give him as change? What are the fewest coins she could give him as change?

← extension

What else could Rohan buy with his money?

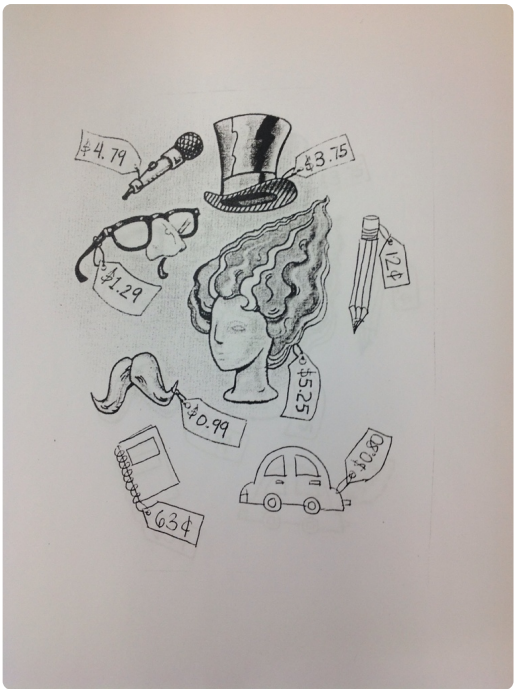

Money Problem:

Rohan goes to a Silly Stuff sale and he brings $10.00. He wants to buy these three things; one hat, one pair of glasses and a mustache. How much money will he have left?

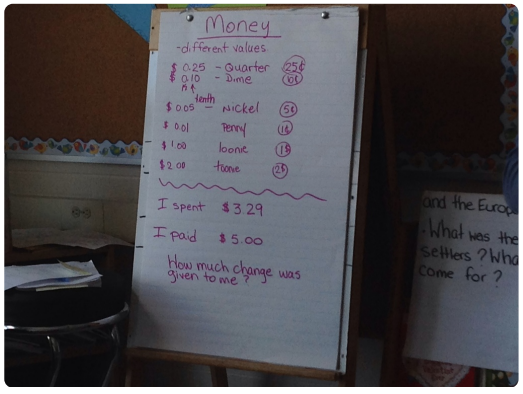
The cashier gives him his change. What are some of the combinations of coins she could give him as change?

What are the fewest coins she could give him as change?

What else could Rohan buy?

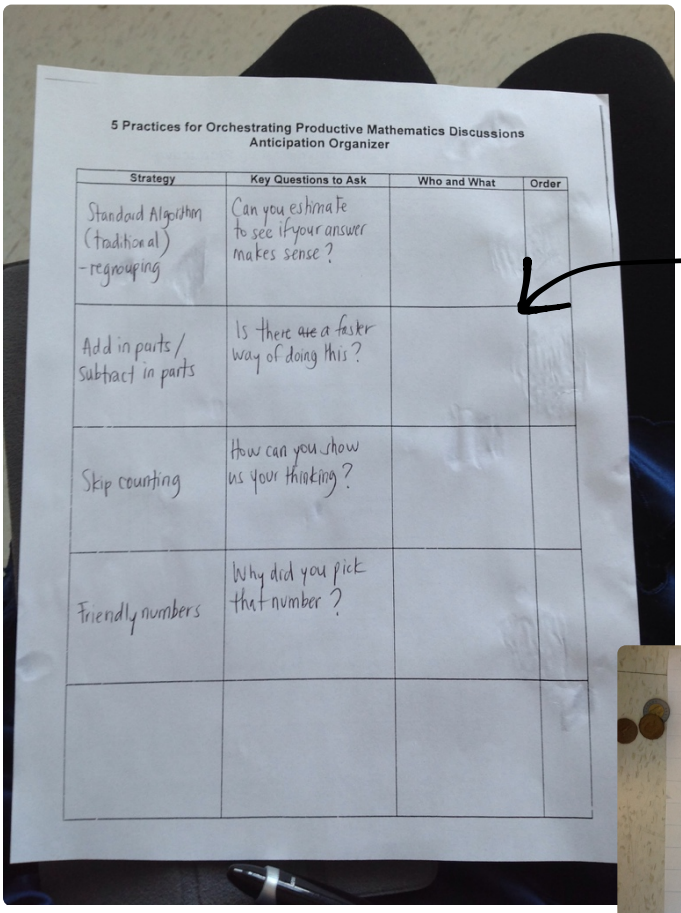


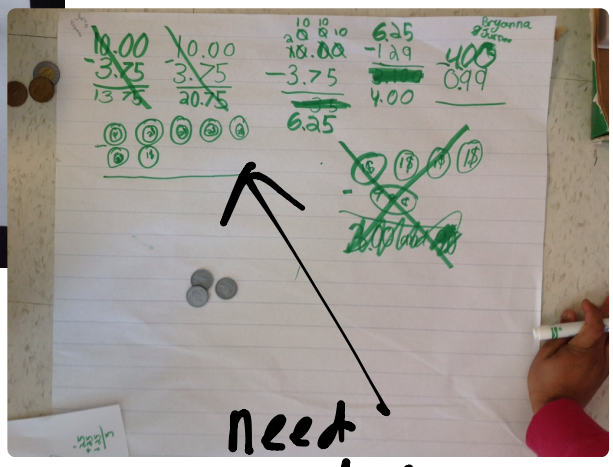
Minds On
Connect to students prior learning of how to represent numerical amounts and write as decimals--is this what we want to see kids doing during the problem?
-how much do we want students doing during the minds on, what do we want to activate?

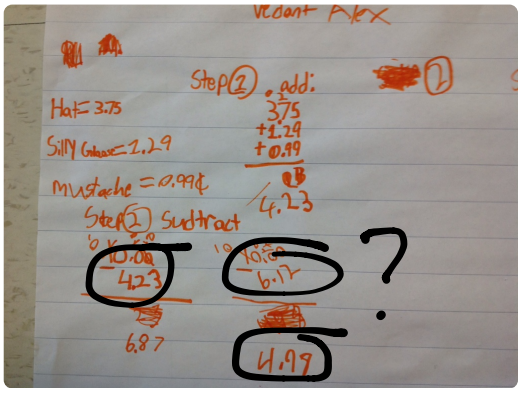


-Instead, let's focus on combinations, give them a total and see what they come up with
-what strategies are students using to count up their coins?
-would document camera help students to see the coin combinations?
-how can we make thinking more visible?

Anticipating the math



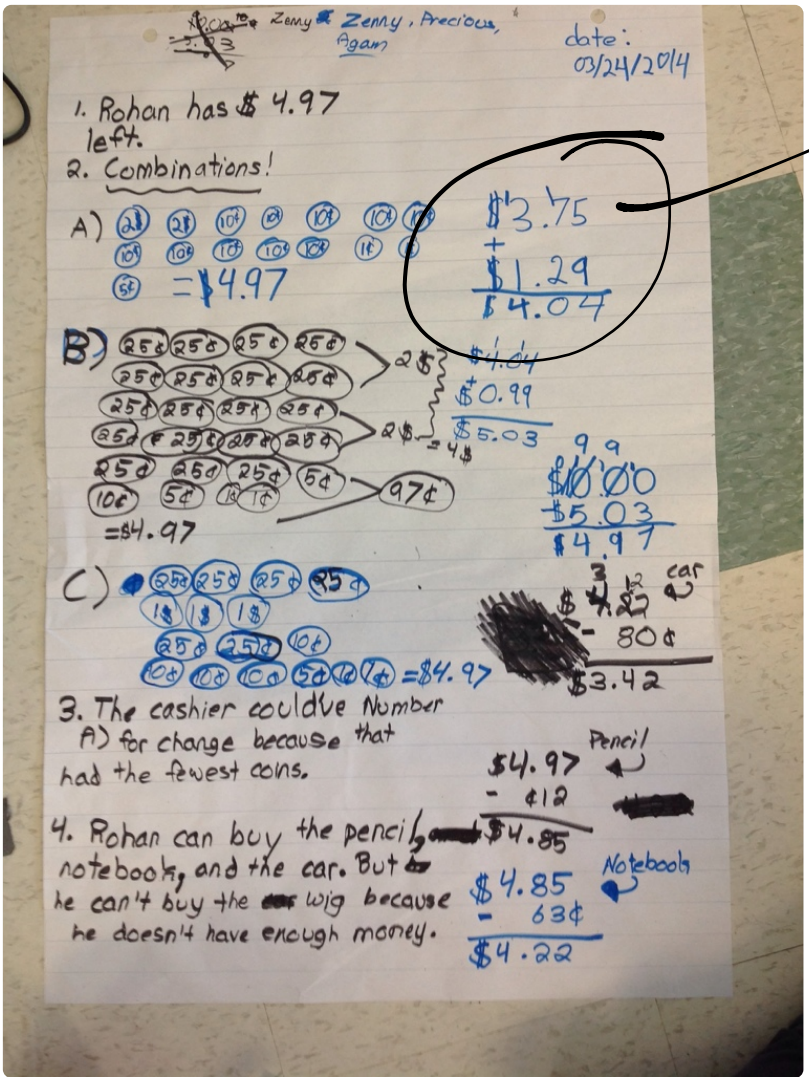




need mental math strategies.

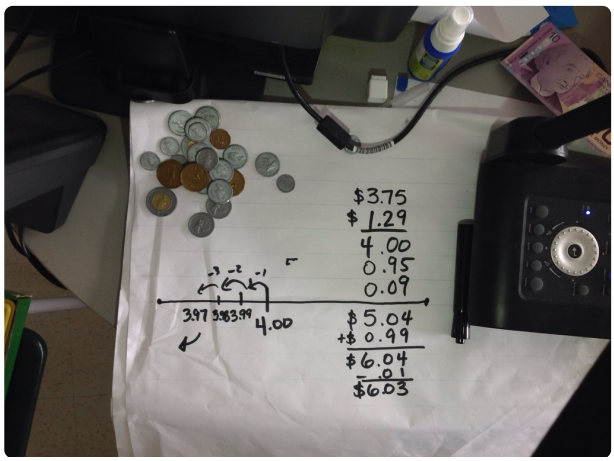
-number line?

Using a procedure without understanding...



Again, is this reasonable? About how much is each, and about how much should that total?

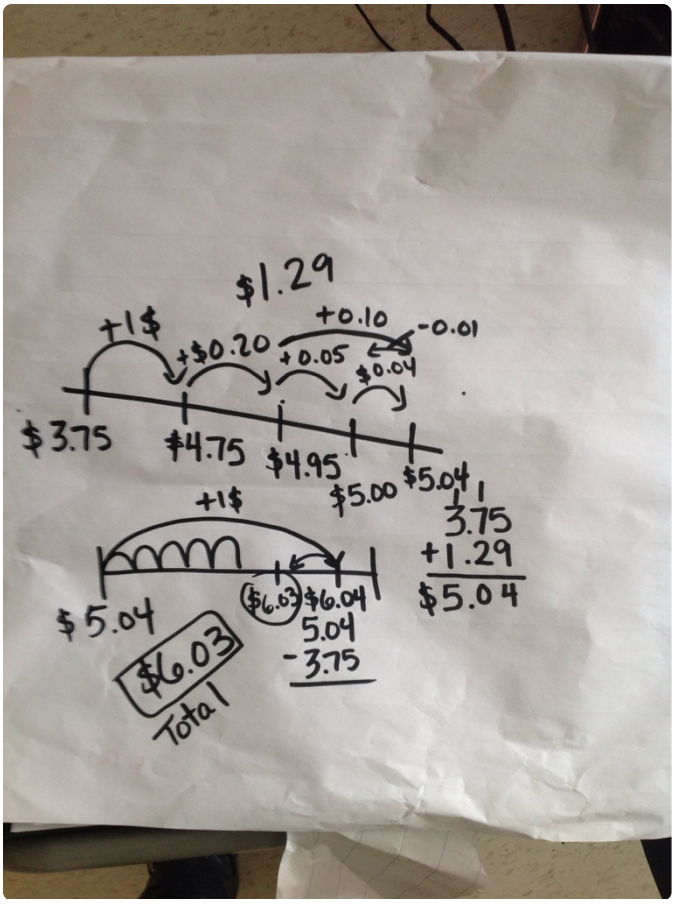
The Debrief
-We will debrief three strategies and make connections between them, beginning with the most concrete
-we will act out the scene so students can see where the addition is and the subtraction, and how they are related



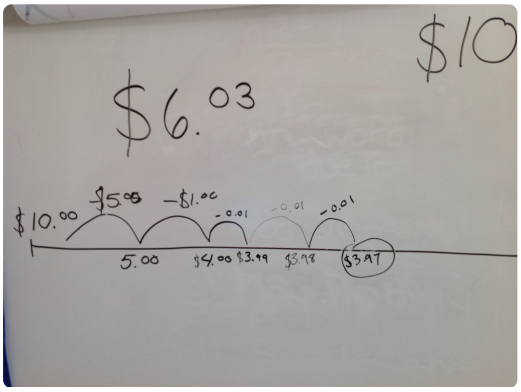
-concrete strategy where students used the coin manipulatives to add in parts, and support students with seeing the connection between addition and subtraction

-friendly numbers, if you have 0.99, could you add $1.00 and then subtract a cent?

Could you start with a 10.00 bill in total and then break it into different combinations, that are equivalent, and then take away each item, concretely?

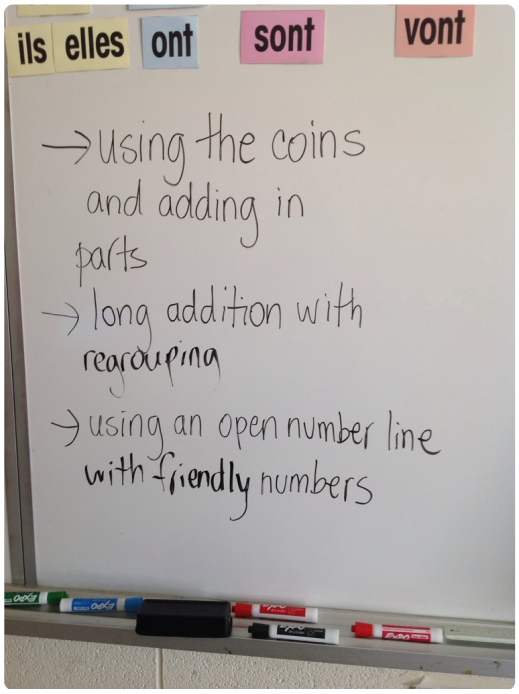


Next, we looked at the traditional algorithm with regrouping...and talked about mental math strategies to check for reasonableness



Then we showed them our own strategy of an open number line and using friendly number jumps to add or subtract in parts...

Let's name the strategies:



Consolidation question, to see what connections students are making, and which strategies they will use:
Buy two or three other items, how much does that cost, what will the change be....