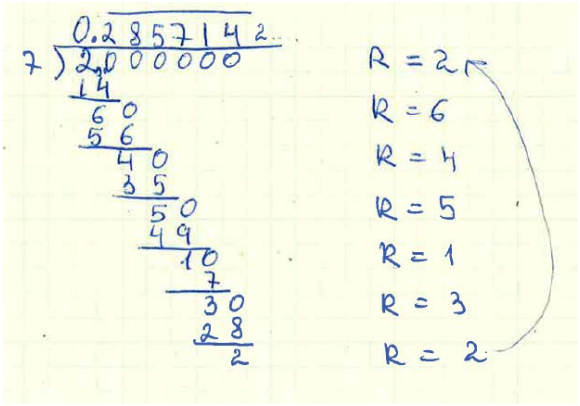
Math 5, CLASSWORK 6, November 1 2020

Decimal fractions:

$\frac{1}{4}; \frac{1}{8}; \frac{2}{9}; \frac{2}{7}$



$\frac{2}{7} = 0.\overline{285714}$

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1. Using example from the classwork turn the following fractions into decimal:

   $\frac{1}{4}$; $\frac{1}{8}$; $\frac{1}{9}$; $\frac{1}{7}$

   Write the answer using a bar for repeating decimals

2. Open parenthesis, collect similar terms using commutative property for multiplication, i.e. $ab = ba$:

   $2(2-b)-3(2a-b)=$

   $a(2-b)-b(2a-b)=$

   $b(2+b)-a(2a+b)=$

3. (a) Show that $(a+1)(a-1) = a^2 - 1$
   (b) Without using a calculator, compute product $199999 \cdot 200001$

4. You have only three buckets: 10 liters, 4 liters, and 3 liters. The 10-liter bucket is full of water and you have no other water available. You are to divide the water so there is exactly 5 liters are in the 10-liter bucket, 1 liter in the 3-liter container, and 4 liters in the 4-liter bucket. You may only pour back and forth between the three given buckets. Describe how to do that using a table below. First and last columns are done for you.

10-l bucket						5
4-l bucket						4
3-l bucket						1

   [*Please recreate similar table in]*

5. Nairi has a bag of M&M candy. There are three colors in the bag: red, green, and brown. She knows that if you draw 100 pieces of candy form the bag (it is a very large bag), then among them there must be candy of all three colors. How many pieces of candy can there be in her bag? Try to find the maximal number possible.