Partial Quotients Strategy for Division

The following is an example that shows how to solve division with Partial Quotients for the problem 727 ÷ 3.

I have 727 cookies that I want to put into 3 bags.

1. First write the problem.

2. Draw a line down the side.

3. Beginning with multiples of 10, estimate how many times 3 goes into 727 without going over. (How many cookies do I THINK I can put into each bag?)

4. Write the number of times that you multiply 3 to the side of the line down the right side of the problem.

5. Multiply 3 X 100 and subtract that from 727. (If I put 100 cookies into each bag, how many cookies have I shared out already? (300) How many do I have left? (427))

This explanation for Division by Estimation/Partial Quotients came from http://library.thinkquest.org/6377/estimati.htm
6. Again beginning with multiples of 10, estimate how many times you can divide 427 by 3.
   (If I have 427 cookies left, how many do I THINK I can put into each bag?)

7. Multiply 3 X 100 and subtract that from 427.
   (I had 427 left; I put 100 in each bag; I’ve shared out another 300;
   I now have 127 left)

8. Again beginning with multiples of 10, estimate how many times you can divide 127 by 3.
   (If I have 127 cookies left, how many do I THINK I can put into each bag?
   I can’t do 100 in each this time!)

9. Multiply 3 X 40 and subtract that from 127.
   (I have 7 cookies left.)

10. Estimate how many times you can divide 7 by 3.
    (I have 7 cookies left- how many can I put into each bag?)

11. Multiply 3 X 2 and subtract that from 7.
    (I put 2 in each bag; I’ve shared out 6; I have 1 left.
     No more sharing!)

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12. Add all the numbers along the right side which should be 100 + 100 + 40 + 2.
   (I first put 100 in each bag; then another 100;
   then 40, then 2- I’ve put 242 in each bag!)

13. Write that number down below the right side line (or above the 727)

14. Since there is still 1 remaining on the left side, your answer should be 242 with a remainder of 1.