chap 0
Prob 16) Form a magic square with the digits 1,2,3,4,5,6,7,8 and 9; that is, place them in the boxes of a 3×3 table so that the sums of the numbers along the rows, columns, and two diagonals are equal.

4	3	8
9	5	1
2	7	6

5+9+1 = 5+8+2 = 5+7+3
= 5+6+4 (5 goes in the middle)

9+5+1 = 9+4+2 (9 goes in middle row)

9+5+1 = 1+8+6 (1 goes in middle row)

(Solving the rest is easy)

Chap 0, Prob 8) Cross out 10 digits from the number 12345123451234512345 12345

so that the remaining no. is as large as possible.

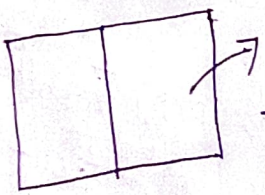
Ans: No matter whichever 10 digits we cross out, we always get a 15-digit number. So, we must try keeping the bigger digits as far left as possible.

~~12345123451234512345~~

55345123451234 5

Chap 0, Prob 3) Jack tore out several successive pages from a book. The no. of the first page he tore out was 183, and it is known that the no. of the last page is written with the same digits in some order. How many pages did Jack tear out of the book?

Ans:



If this is the first page torn out, then the last page must have opposite parity (It's obvious)

only even no.
318, 381, 813, 831

(318−183)+1 = 136

This can't be first page torn out, because if it is, the content of the prev page will be counted as first page.

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