Math

	2	~~Add Two Numbers (/problems/add-two-numbers)~~
✔	13	~~Roman to Integer (/problems/roman-to-integer)~~
	9	Palindrome Number (/problems/palindrome-number)
✔	12	Integer to Roman (/problems/integer-to-roman)
	7	Reverse Integer (/problems/reverse-integer) $[-2^{31}, 2^{31} - 1]$.
	~~535~~	~~Encode and Decode TinyURL~~ (/problems/encode-and-decode-tinyurl)
	66	~~Plus One (~~/problems/plus-one)
	258	Add Digits (/problems/add-digits)
	~~149~~	~~Max Points on a Line (/problems/max-points-on-a-line)~~ Will do this in hashtable
✔	67	~~Add Binary~~ (/problems/add-binary)
	202	~~Happy Number (/problems/happy-number)~~
	171	~~Excel Sheet Column Number (/problems/excel-sheet-column-number)~~
	50	~~Pow(x, n) (/problems/powx-n)~~
	172	Factorial Trailing Zeroes (/problems/factorial-trailing-zeroes)
	8	String to Integer (atoi) (/problems/string-to-integer-atoi)
	233	Number of Digit One (/problems/number-of-digit-one)
	273	Integer to English Words (/problems/integer-to-english-words)
	728	~~Self Dividing Numbers (~~/problems/self-dividing-numbers)
	319	Bulb Switcher (/problems/bulb-switcher)
	223	Rectangle Area (/problems/rectangle-area)
	29	Divide Two Integers (/problems/divide-two-integers)
✔	268	Missing Number (/problems/missing-number)
	326	Power of Three (/problems/power-of-three)
	43	Multiply Strings (/problems/multiply-strings)

```
Input: 10
Output: false
Explanation: Reads 01 from right to left. Therefore it is not a palindrome.
```

```
public boolean isPalindrome(int x) {
    if (x<0 || (x!=0 && x%10==0)) return false;
    int rev = 0;
    while (x>rev){
        rev = rev*10 + x%10;
        x = x/10;
    }
    return (x==rev || x==rev/10);
}
```

```
M = ["", "M", "MM", "MMM"]
C = ["", "C", "CC", "CCC", "CD", "D", "DC", "DCC", "DCCC", "CM"]
X = ["", "X", "XX", "XXX", "XL", "L", "LX", "LXX", "LXXX", "XC"]
I = ["", "I", "II", "III", "IV", "V", "VI", "VII", "VIII", "IX"]
return M[num//1000] + C[(num%1000)//100] + X[(num%100)//10] + I[num%10];
```

```
Input: 38
Output: 2
Explanation: The process is like: 3 + 8 = 11, 1 + 1 = 2.
             Since 2 has only one digit, return it.
```

```
return 0 if num == 0 else (num - 1) % 9 + 1
```

```
Input: 5
Output: 1
Explanation: 5! = 120, one trailing zero.
```

- ✔ 279 ~~Perfect Squares (/problems/perfect-squares)~~
- 335 Self Crossing (/problems/self-crossing)
- 204 Count Primes (/problems/count-primes)
- 453 Minimum Moves to Equal Array Elements (/problems/minimum-moves-to-equal-array-elements)
- 69 Sqrt(x) (/problems/sqrtx)
- 65 Valid Number (/problems/valid-number)
- 231 Power of Two (/problems/power-of-two)
- 224 Basic Calculator (/problems/basic-calculator)
- 263 Ugly Number (/problems/ugly-number)
- 168 Excel Sheet Column Title (/problems/excel-sheet-column-title)
- 415 Add Strings (/problems/add-strings)
- 413 Arithmetic Slices (/problems/arithmetic-slices)
- 628 Maximum Product of Three Numbers (/problems/maximum-product-of-three-numbers)
- 166 Fraction to Recurring Decimal (/problems/fraction-to-recurring-decimal)
- 357 Count Numbers with Unique Digits (/problems/count-numbers-with-unique-digits)
- 264 Ugly Number II (/problems/ugly-number-ii)
- 343 Integer Break (/problems/integer-break)
- ✔ 60 Permutation Sequence (/problems/permutation-sequence)
- 296 Best Meeting Point (/problems/best-meeting-point) 🔓
- 372 Super Pow (/problems/super-pow)
- 812 Largest Triangle Area (/problems/largest-triangle-area)
- 400 Nth Digit (/problems/nth-digit)
- 368 Largest Divisible Subset (/problems/largest-divisible-subset)
- 313 Super Ugly Number (/problems/super-ugly-number)
- 537 Complex Number Multiplication (/problems/complex-number-multiplication)

396 Rotate Function (/problems/rotate-function)

672 Bulb Switcher II (/problems/bulb-switcher-ii)

753 Cracking the Safe (/problems/cracking-the-safe)

883 Projection Area of 3D Shapes (/problems/projection-area-of-3d-shapes)

829 Consecutive Numbers Sum (/problems/consecutive-numbers-sum)

553 Optimal Division (/problems/optimal-division)

942 DI String Match (/problems/di-string-match)

887 Super Egg Drop (/problems/super-egg-drop)

633 Sum of Square Numbers (/problems/sum-of-square-numbers)

367 Valid Perfect Square (/problems/valid-perfect-square)

507 Perfect Number (/problems/perfect-number)

877 Stone Game (/problems/stone-game)

908 Smallest Range I (/problems/smallest-range-i)

645 Set Mismatch (/problems/set-mismatch)

441 Arranging Coins (/problems/arranging-coins)

462 Minimum Moves to Equal Array Elements II (/problems/minimum-moves-to-equal-array-elements-ii)

598 Range Addition II (/problems/range-addition-ii)

670 Maximum Swap (/problems/maximum-swap)

858 Mirror Reflection (/problems/mirror-reflection)

365 Water and Jug Problem (/problems/water-and-jug-problem)

423 Reconstruct Original Digits from English (/problems/reconstruct-original-digits-from-english)

836 Rectangle Overlap (/problems/rectangle-overlap)

885 Spiral Matrix III (/problems/spiral-matrix-iii)

247 Strobogrammatic Number II (/problems/strobogrammatic-number-ii) 🔓

248 Strobogrammatic Number III (/problems/strobogrammatic-number-iii) 🔓

592 Fraction Addition and Subtraction (/problems/fraction-addition-and-subtraction)

478 Generate Random Point in a Circle (/problems/generate-random-point-in-a-circle)

246 Strobogrammatic Number (/problems/strobogrammatic-number) 🔓

593 Valid Square (/problems/valid-square)

517 Super Washing Machines (/problems/super-washing-machines)

891 Sum of Subsequence Widths (/problems/sum-of-subsequence-widths)

754 Reach a Number (/problems/reach-a-number)

780 Reaching Points (/problems/reaching-points)

775 Global and Local Inversions (/problems/global-and-local-inversions)

640 Solve the Equation (/problems/solve-the-equation)

397 Integer Replacement (/problems/integer-replacement)

360 Sort Transformed Array (/problems/sort-transformed-array) 🔓

523 Continuous Subarray Sum (/problems/continuous-subarray-sum)

781 Rabbits in Forest (/problems/rabbits-in-forest)

892 Surface Area of 3D Shapes (/problems/surface-area-of-3d-shapes)

899 Orderly Queue (/problems/orderly-queue)

660 Remove 9 (/problems/remove-9) 🔓

868 Binary Gap (/problems/binary-gap)

805 Split Array With Same Average (/problems/split-array-with-same-average)

483 Smallest Good Base (/problems/smallest-good-base)

910 Smallest Range II (/problems/smallest-range-ii)

869 Reordered Power of 2 (/problems/reordered-power-of-2)

914 X of a Kind in a Deck of Cards (/problems/x-of-a-kind-in-a-deck-of-cards)

794 Valid Tic-Tac-Toe State (/problems/valid-tic-tac-toe-state)

810 Chalkboard XOR Game (/problems/chalkboard-xor-game)

906 Super Palindromes (/problems/super-palindromes)

952 Largest Component Size by Common Factor (/problems/largest-component-size-by-common-factor)

634 Find the Derangement of An Array (/problems/find-the-derangement-of-an-array) 🔓

782 Transform to Chessboard (/problems/transform-to-chessboard)

651 4 Keys Keyboard (/problems/4-keys-keyboard) 🔓

878 Nth Magical Number (/problems/nth-magical-number)

866 Prime Palindrome (/problems/prime-palindrome)

800 Similar RGB Color (/problems/similar-rgb-color) 🔓

789 Escape The Ghosts (/problems/escape-the-ghosts)

469 Convex Polygon (/problems/convex-polygon) 🔓

949 Largest Time for Given Digits (/problems/largest-time-for-given-digits)

625 Minimum Factorization (/problems/minimum-factorization) 🔓

964 Least Operators to Express Number (/problems/least-operators-to-express-number)

573 Squirrel Simulation (/problems/squirrel-simulation) 🔓

356 Line Reflection (/problems/line-reflection) 🔓

927 Three Equal Parts (/problems/three-equal-parts)

902 Numbers At Most N Given Digit Set (/problems/numbers-at-most-n-given-digit-set)

963 Minimum Area Rectangle II (/problems/minimum-area-rectangle-ii)