



2IIM

CAT

Blitzkrieg

**LET'S SOLVE
ALL CAT QUESTIONS
FROM
NUMBER THEORY**

How to Blitzkrieg

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1. CAT 2021 - Slot 1

How many three-digit numbers are greater than 100 and increase by 198 when the three digits are arranged in the reverse order? [TITA]

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2. CAT 2021 - Slot 2

For a 4-digit number, the sum of its digits in the thousands, hundreds and tens places is 14, the sum of its digits in the hundreds, tens and units places is 15, and the tens place digit is 4 more than the units place digit. Then the highest possible 4-digit number satisfying the above conditions is [TITA]



3. CAT 2020 - Slot 1

How many 3-digit numbers are there, for which the product of their digits is more than 2 but less than 7?

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4. CAT 2020 - Slot 1

The mean of all 4-digit even natural numbers of the form 'aabb', where $a > 0$, is

- A. 5544
- B. 4466
- C. 4864
- D. 5050



5. CAT 2020 - Slot 1

If a , b and c are positive integers such that $ab = 432$, $bc = 96$ and $c < 9$, then the smallest possible value of $a + b + c$ is

- A. 56
- B. 49
- C. 46
- D. 59



6. CAT 2020 - Slot 3

How many of the integers $1, 2, \dots, 120$, are divisible by none of 2, 5, and 7?

- A. 43
- B. 40
- C. 42
- D. 41



7. CAT 2019 - Slot 1

The product of two positive numbers is 616. If the ratio of the difference of their cubes to the cube of their difference is 157:3, then the sum of the two numbers is

- A. 50
- B. 85
- C. 95
- D. 58



8. CAT 2019 - Slot 2

How many factors of $2^4 \times 3^5 \times 10^4$ are perfect squares which are greater than 1?

[TITA]

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9. CAT 2018 - Slot 1

While multiplying three real numbers, Ashok took one of the numbers as 73 instead of 37. As a result, the product went up by 720. Then the minimum possible value of the sum of squares of the other two numbers is:

[TITA]



10. CAT 2018 - Slot 2

If the sum of squares of two numbers is 97, then which one of the following cannot be their product?

- A. 64
- B. -32
- C. 16
- D. 48

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