FLASH MENTAL ARITHMETIC



Flash mental arithmetic:
Koji memorized the answers to all 10 questions.
All the numbers have to be added together.
1./2. 3 1-digit-numbers + solution in 5s
3./4. 6 2-digit-numbers + solution in 5s
5. 6 3-digit-numbers + solution in 5s
6. 8 3-digit numbers + solution in 5s
7 12 3-digit-numbers + solution in 4.5s
8 15 3-digit-numbers + solution in 3.5s
9 15 3-digit-numbers + solution in 2.5s

10.15 3-digit-numbers + solution in 1.6 sec
This is a lowball PSI and WMI feat since Arisu and Koenji were also able to perform this and Arisu even did this for the first time in her life.

For Ayanokoji performing the full Flash Mental Arithmetic sequence, we can estimate his times across low, mid, and highball tiers based on the original feat while factoring his superiority over Arisu and Koenji.

Lowball (very superior to Arisu/Koenji): Since the original fastest human-level time for question ten is 1.6 seconds, Ayanokoji's lowball would conservatively cut this by roughly half. That places him around 0.8–0.9 seconds for question ten, with earlier questions taking proportionally less time. Cumulatively, the ten-question sequence could be done in roughly 7–8 seconds in total, assuming linear scaling with question difficulty.

The midball category represents a performer who is approaching capability but hasn't yet reached the extreme mental processing of the highball. For question ten, which involves summing fifteen 3-digit numbers, a midball performer would process each number in roughly 0.133 seconds, totaling about 2.0 seconds for the full calculation. At this level, chunking strategies are actively used: instead of adding numbers strictly one by one, the performer groups numbers into manageable partial sums, holding multiple totals in working memory simultaneously. Pattern recognition becomes critical, allowing the brain to anticipate sums and eliminate redundant steps, reducing cognitive load. Visualization techniques may be employed to mentally "see" the running total as a structured array, rather than a series of discrete numbers, which significantly speeds processing. Accuracy remains near perfect because the performer balances speed with cognitive stability, using insight to bypass unnecessary linear calculations. Essentially, midball demonstrates a near-optimal combination of PSI, WMI, and mental structuring, bridging the gap between standard high performers and the superhuman precision and speed of someone like Ayanokoji.

The highball. For question ten, summing fifteen 3-digit numbers, a highball performer would complete the calculation in roughly 1.0 second or less, lowballing conservatively at around 0.8–0.9 seconds. At this stage, working memory and processing speed (PSI and WMI) operate at near-maximal efficiency: the performer can hold multiple running totals simultaneously, instantly recognize numerical patterns, and perform "chunked" additions almost intuitively. Visualization is instantaneous, with the sum appearing as if on a mental spreadsheet, allowing for near-zero time wasted on transferring partial sums. Cognitive functions like deductive reasoning and prediction are also in play: the brain anticipates carryovers and adjusts the running total without explicit step-by-step computation. Accuracy remains flawless because the mental processes are deeply automated, combining speed, memory, and insight.

Ayanokoji's estimated times for lowball, midball, and highball FMA performance:

All the numbers have to be added together.

Lowball (Due to WR narrative, it can be higher):
1./2. 3 1-digit-numbers + solution in 2.5s
3./4. 6 2-digit-numbers + solution in 2.5s
5. 6 3-digit-numbers + solution in 2.5s
6. 8 3-digit numbers + solution in 2.5s
7. 12 3-digit-numbers + solution in 2.0s
8. 15 3-digit-numbers + solution in 1.5s
9. 15 3-digit-numbers + solution in 1.0s
10. 15 3-digit-numbers + solution in 0.8s

Midball (Due to WR narrative, it can be higher):
1./2. 3 1-digit-numbers + solution in 1.2s
3./4. 6 2-digit-numbers + solution in 1.0s
5. 6 3-digit-numbers + solution in 1.0s
6. 8 3-digit numbers + solution in 1.0s
7. 12 3-digit-numbers + solution in 0.8s
8. 15 3-digit-numbers + solution in 0.6s
9. 15 3-digit-numbers + solution in 0.5s
10. 15 3-digit-numbers + solution in 0.5s

Highball (Due to WR narrative, it can be higher):
1./2. 3 1-digit-numbers + solution in 0.8s
3./4. 6 2-digit-numbers + solution in 0.6s
5. 6 3-digit-numbers + solution in 0.6s
6. 8 3-digit numbers + solution in 0.6s
7. 12 3-digit-numbers + solution in 0.5s
8. 15 3-digit-numbers + solution in 0.4s
9. 15 3-digit-numbers + solution in 0.2s
10. 15 3-digit-numbers + solution in 0.05s