

## **Generative AI – Self Reflection**

After many testing with the bot, I realized it performs well with small iterations but tends to generate the wrong answer when the iteration value is larger. For example, with the inputs (2, 7) and (3,6) GPT-4o produces an incorrect result and appears to have a character limit of 30. I have discovered that when the number become too large, the model will struggle to generate the correct answer. It seems like the response is truncated instead of being a whole different number and send out that it has failed with a humorous self-deprecating response. I suspect these issues are related to token length limitation, as the model cannot fully process large numbers or complex expressions. Instead, it appears to be struggling to retain all digits as we can see with this bot. Therefore, I don't think GPT-4o, specifically mini, is not optimized for handling extremely large number with full precision. I have also tested the bot with negative numbers, and it is outputting the right answer surprisingly. I think AI models like GPT-4o are not specifically trained to perform large-scale mathematical operations. Similar to ChatGPT, the answer generated by generative AI models is not always right, even when the steps appear to be correct. I have realized that with simple mathematical operation, it is less prone to make errors and is more reliable. Also, instead of strictly following arithmetic rules that make the answer super precise, it is predicting the answer based on patterns from data training.