In-Class Question 1

Question)

Just a reminder: you **cannot use a physical calculator or a calculator program** in this exam. You can only use Python IDLE.

The current world population is around 8 billion. Let's say there are currently 8,058,747,468 people in the world right now.

Someone has proposed that the average growth rate of the population is 12% after every 10 years. That means 10 years later, we will have 8,058,747,468 × 112% = 9,025,797,164.16 ≈ 9,025,797,164 people in the world.

With the information shown above, use Python IDLE to work out the number of people in the world **50 years from now**.

Your answer must be an integer. You can change your number to an integer by rounding down, i.e. removing the fractional part.

For example, if you think the number is 10.34, your answer will be 10; if you think the number is 9.89, your answer will be 9.

For your answer, just **enter an integer**. Don't enter a formula, or a mathematical expression, or anything like that. Don't enter any letters. Don't enter a full stop or a decimal place. Just **enter an integer**.

Correct answer(s):

- `14202266577`

Explanation:

- The result can be calculated using IDLE by multiplying 8,058,747,468 with 1.12 five times, i.e.:

  `8058747468 * 1.12 * 1.12 * 1.12 * 1.12 * 1.12`

- The answer must be an integer by dropping the fractional part
- Alternatively, the same answer can be obtained using the ** operator (the power operator), i.e.:

  `8058747468 * 1.12 ** 5`