Student Name: _____

Please write your name on *every* page.

1 Section A

A1
What is the sum of the digits of $20 \times (26 + 20 \times (26 + 20 \times 26))$?

Answer to A1: _____

A2
Sable is a cat who gets fed twice per day. Each of her meals has 75 pieces of kibble. On Fridays, she gets 5 extra pieces of kibble as a treat between her meals. How many pieces of kibble does Sable eat per week?

Answer to A2: _____

A3
Alice is 80 years old. Alice is four times as old as Betty, and Carlie is three times as old as Betty. How much older is Alice than Carlie?

Answer to A3: _____

A4
Ben writes the numbers from 1 to 20 on the board. He pairs up the numbers so that the two numbers in every pair add to the same total. What is that total?

Answer to A4: _____

A5
The city of Waterloo has 155000 people living in it. The mayor of Waterloo wants to give everyone a unique ID number of the same length. What is the minimum length of ID number that ensures this is possible?

Answer to A5: _____

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A6

Sue folds a strip of paper in half, then in half again, then in half again. She punches one small hole through all the layers. How many holes does the strip have when she unfolds it?

Answer to A6: _____

A7

Today is Saturday. What day of the week will it be 100 days after today?

Answer to A7: _____

A8

Amy is raising a colony of cells for her biology class. On the first day, she has just two cells in a container, but each night, each of the cells divides into two identical cells, doubling the number of cells in the container. On what day will Amy have more than 2026 cells for the first time?

Answer to A8: _____