COMP2804B F2025   **Quiz 1, Sep 24**

☐0 ☐0 ☐0 ☐0 ☐0 ☐0 ☐0 ☐0 ☐0
☐1 ☐1 ☐1 ☐1 ☐1 ☐1 ☐1 ☐1 ☐1
☐2 ☐2 ☐2 ☐2 ☐2 ☐2 ☐2 ☐2 ☐2
☐3 ☐3 ☐3 ☐3 ☐3 ☐3 ☐3 ☐3 ☐3
☐4 ☐4 ☐4 ☐4 ☐4 ☐4 ☐4 ☐4 ☐4
☐5 ☐5 ☐5 ☐5 ☐5 ☐5 ☐5 ☐5 ☐5
☐6 ☐6 ☐6 ☐6 ☐6 ☐6 ☐6 ☐6 ☐6
☐7 ☐7 ☐7 ☐7 ☐7 ☐7 ☐7 ☐7 ☐7
☐8 ☐8 ☐8 ☐8 ☐8 ☐8 ☐8 ☐8 ☐8
☐9 ☐9 ☐9 ☐9 ☐9 ☐9 ☐9 ☐9 ☐9

⟵   encode your student number on the left, and write your name and student number below.

Name and Student ID:

....

....

Duration : 80 minutes
No documents allowed. The use of electronic calculators is forbidden.
Choose exactly one answer for each question. If you think that more than one answer is correct, choose the most precise of all the correct answers.

Question 1   At Nate's Burgers, a *meal* consists of a drink (Coke, Sprite, or Beer), a main (Beef Burger, Chicken Burger, or Veggie Burger) and a dessert (Cookie or Ice Cream). How many different meals are available at Nate's Burgers?

☐ 8
☐ 22
☐ 3^3
☐ 11
☐ 18

Question 2   A *password* is a string of length 8 over the 36-letter alphabet $\Sigma = \{a, b, \ldots, z, 0, 1, \ldots, 9\}$ that contains at least one of the digits $0, \ldots, 9$. For example, fr1tter5 and fritt3rs are passwords, but fritters is not. Let S be the set of all passwords. What is $|S|$?

☐ $36^8 \times 26^8$
☐ $36^8 - 26^8$
☐ $36^8 + 26^8$
☐ 36^8
☐ 26^8