

**CISS240: Introduction to Programming**  
**Quiz q0603**

Name: \_\_\_\_\_

Score: 

This is a closed-book, no C++ compiler, 2-minute quiz.

Q1. Using De Morgan's laws rewrite the following C++ boolean expression so that the ! operator is not used.

$$!(x > 5 \ \&\& \ y \leq z + 3)$$

ANSWER:

Q2. Using De Morgan's laws rewrite the following C++ boolean expression so that the ! operator is not used.

$$!(x \leq -2 \ || \ y > z - 9)$$

ANSWER:

Q3. Using De Morgan's laws rewrite the following C++ boolean expression so that the ! operator is not used.

$$!(x \geq 3 \ \&\& \ y < z - 3 \ || \ x > 2 \ \&\& \ y < z + 7)$$

ANSWER:

Q4. Using De Morgan's laws rewrite the following C++ boolean expression so that the ! operator is not used.

$$!(x \neq 4 \ || \ y < x + z \ \&\& \ x < 2 \ || \ y < 3)$$

ANSWER: