**First Name:**

**Last Name:**

**Worksheet**

# Boolean Algebra

# 1. Write an equivalent statement for the following:

# a. !(age < 18)

# b. !(temperature >= 32)

# c. !(a <= b)

# d. !(money == happiness)

# e. !(time != 5)

# 2. The expression !((m < n) || (m != 5)) is equivalent to which of the following:

# a. (m < n) && (m != 5)

# b. !(m < n) || !(m != 5)

# c. (m > n) && (m == 5)

# d. (m >= n) && (m == 5)

# e. (m <= n) || !(m == 5)

# 3. The expression (king != 3) && (queen != 4) is equivalent to which of the following:

# a. (king != 3) || (queen != 4)

# b. !((king == 3) && (queen == 4))

# c. (king == 3) || (queen == 4)

# d. !((king == 3) || (queen == 4))

# e. !((king == 3) && (queen == 4))

# 4. Rewrite the following line of code using one of DeMorgan's Laws:

# while (!(x < y && count <= 0))

# \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

# 5. Rewrite the following line of code using one of DeMorgan's Laws:

# if (num < 1 && w != temp)

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