Name _____ Due Date _____

Numbering Systems HW #2

Write the numbers 0_{10} to 63_{10} in binary using 8 bits for each number (write going down the columns).

Convert from base$_{10}$ to base$_2$ (show work on back)

1. 12345_{10} = _____$_2$

2. 11111_{10} = _____$_2$

3. 127_{10} = _____$_2$

4. 4095_{10} = _____$_2$

Convert from base$_2$ to base$_{10}$ *(show work on back)*

5. $0000\ 1010\ 1010_2$ = _____$_{10}$

6. $0101\ 0101\ 0101_2$ = _____$_{10}$

7. $1111\ 1111\ 1111_2$ = _____$_{10}$

Challenge: Write the following base$_{10}$ numbers in binary and show how you got your answer.

a. $\frac{7}{8}$ **b.** $\frac{27}{32}$ **c. .35 (Base 10)**