

CIS 350 – INFRASTRUCTURE TECHNOLOGIES

HOMEWORK # 2

Group work (maximum 2 students)

NAME(S): _____

Do not use built-in conversion functions on your calculator! Use back page for calculations if you need.
Assume unsigned numbers (≥ 0).

Topics: Number systems and conversion between number bases

Work the following problems:

1. Convert to Binary:

decimal:	$(84)_{10}$	binary:	_____
octal:	$(562)_8$	binary:	_____
hexa:	$(CB4)_{16}$	binary:	_____

2. Convert to Octal:

decimal:	$(182)_{10}$	octal:	_____
binary:	$(11111110)_2$	octal:	_____
hexa:	$(BF)_{16}$	octal:	_____

3. Convert to Decimal:

binary:	$(11101011)_2$	decimal:	_____
octal:	$(535)_8$	decimal:	_____
hexa:	$(B2A)_{16}$	decimal:	_____

4. Convert to Hexadecimal:

binary:	$(11001111100)_2$	hexadecimal:	_____
octal:	$(476)_8$	hexadecimal:	_____
decimal:	$(583)_{10}$	hexadecimal:	_____

5. Convert Binary to Decimal, Octal, and Hexadecimal:

binary:	$(101111.11)_2$	decimal:	_____
binary:	$(111010.1110011)_2$	octal:	_____
binary:	$(111010.1110011)_2$	hexadecimal:	_____

6. Convert from Decimal to Hexadecimal. If the answer is irrational, stop at four hexadecimal digits:

decimal:	$(0.66796875)_{10}$	hexadecimal:	_____
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7. How many bits will it take to represent the decimal number 2,050,735? How many bytes will it take to store this number?