Brandon Smith

Lab #2 Conversion Base 2, 8, 10, 16

Base 2	Base 8	Base 10	Base 16
$(0.25 \cdot 2^2) = 1$	$(0.25 \cdot 8^1) = 2$	0.25_{10}	$(0.25 \cdot 16^1) = 4$
1/2 | 0 | 1	2/8 | 0 | 2		4/16 | 0 | 4
$= 0.01_2$	$= 0.2_8$		$= 0.4_{16}$
$(0.328125 \cdot 2^6)$	0.25_8	$(2 \cdot 8^{-1}) + (5 \cdot 8^{-2})$	$(0.328125 \cdot 16^2)$
$= 21$		$= 0.328125_{10}$	$= 84$
21/2 | 10 | 1			84/16 | 5 | 4
10/2 | 5 | 0			5/16 | 0 | 5
5/2 | 2 | 1			$= 0.54_{16}$
2/2 | 1 | 0			
1/2 | 0 | 1			
$= 0.010101_2$			
$(0.14453125 \cdot 2^6)$	$(0.14453125 \cdot 8^3)$	$(2 \cdot 16^{-1}) + (5 \cdot 16^{-2})$	0.25_{16}
$= 9.25$	$= 74$	$= 0.14453125_{10}$	
9/2 | 4 | 1	74/8 | 9 | 2		
4/2 | 2 | 0	9/8 | 1 | 1		
2/2 | 1 | 0	1/8 | 0 | 1		
1/2 | 0 | 1	$= 0.112_8$		
$= 0.00100101_2$			
0.1101_2	110 100 / 6 4	$(1 \cdot 2^{-1}) + (1 \cdot 2^{-2})$	1101 0000 / 15 0
	$= 0.64_8$	$+ (1 \cdot 2^{-4}) = 0.8125_{10}$	D $= 0.D_{16}$