Christopher DeLotto – Homework1 (PHY410)

A) (2^5)-10 = 22
= 10110

B)(1 X 2^8)+(1 x 2^7)+(0 x 2^6)+(1 x 2^5)+(1 x 2^4)+(0 x 2^3)+(1 x 2^2)+(0 x 2^1)+(0 x 2^0)= 110110100 = 436

2's comp.:

(2^{10})-436 = 588
= 1001001100

C) (1 x 2^{10})....(0 x 2^0) = 010000000000 = 1024

2's comp.:

101111111111 + 1 = 110000000000

D)

2's comp.(13):
= 10011
2's comp.(-13):
= 01101

E)(1 x 2^9)+ (1 X 2^8)+(1 x 2^7)+(1 x 2^6)+(1 x 2^5)+(1 x 2^4)+(1 x 2^3)+(1 x 2^2)+(1 x 2^1)+(1 x 2^0)= 1111111111 = 1023

2's comp.(1023):
= 10000000001

2's comp.(-1023):
=01111111111

F)(1 x 2^{10})....(0 x 2^0) = 010000000000 = 1024

2's comp.:

101111111111 + 1 = 110000000000

2's comp.(-1024):
= 010000000000