KENNY TA.

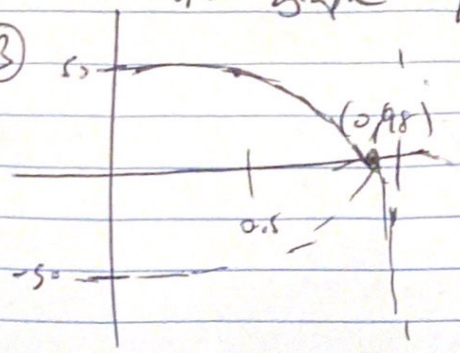
Ass. 13.

(1) (A) $f(x) = 50 - \sum_{n=2}^{100}(x^n) + 10x^{101}$ $\{0, < x < 1\}$

from graph $y = 0.98$ when $y > 0.98 = 1$

$y < 0.98 = f$.

(B)



(C) $y = 1/2$ then go ↑.

(2) (A) $0.97 = H(y) = 0.6 \log_2(0.6) - 0.4 \log(0.4) =$

$0.8 = H(A_1) = 0.8\,(-0.5 \log(0.5) - 0.5 \log(0.5)) =$

$0.55 = H(A_2) = 0.4(-\log(1)) + 0.6(-0.33 \log(0.33) - 0.66 \log(0.66)) =$

$0.95 = H(A_3) = 0.4(-0.5 \log(0.5) - 0.5 \log(0.5)) + 0.6(-0.33 \log(0.33) -$ ~~0.66 log(0.66))~~ $0.66 \log(0.66)) =$

(A) gain $= 0.97 - 0.8 =$ (0.17)

(B) gain $= 0.97 - 0.55 =$ (0.42)

(C) gain $= 0.97 - 0.95 =$ (0.02)

(2)