1.

512 Bytes = 4096 Bits. Log2(4096) = 12. This is the number of hamming code bits that we need. It would get us to 4108 bits. Log2(4108) = 13. This is because I am rounding up. This gets us to 4109. Another bit is needed to replace the 0th bit. This is used for parity. This brings you to 4110 bits. 14 of these are hamming bits.

2.

FCFS

(93-45) + (1950-45) + (1950-912) + (1090-912) + (1090-130) + (130-10) + (f2250-10) + (2250-130) = 8609

SSTF

(130-93) + (130-130) + (130-45) + (45-10) + (912-10) + (1090-912) + (1950-1090) + (2250-1950) = 2397

SCAN

(93-0) + (2250-0) = 2343

LOOK

(93-10) + (2250-10) = 2323

CSCAN

(93 - 0) + (2999 - 0) + (2999 - 130) = 5961