**1.**

(6000 rotations)/(1 min) \* (1 min)/(60 sec) = 100 rotations per second

For 8 surfaces:

(8 tracks)/(1 cylinder) \* (10240 sectors)/(1 track) \* (512 bytes)/(1 sector) = 41943040 bytes per cylinder.

30 (rotation/readtime) + 2(seektime) = 32 ms.

Although the system can read 120 MB of data in 32 ms, the max transfer rate is 100 MB/sec.

**2.**

(10240 sectors / 1 track) \* (1 / 10ms) = 1024 sectors in 1 ms

**3.**

40 MB / cylinder \* 100 rotations/sec \* 1 cyl/rotation = 4000 MB/sec

There is still the limitation of the 100 MB/sec data transfer.

**4.**

Raid 5 can have a drive fail and still have read and write access. It also has a very high performance and reliability.

**5.**

RAID 1 uses duplication. This means that if 1 disk is infected and encrypted, then all of them will be. Thus, using RAID 1 does not offer any extra protection.