Computer Organization and Design (4th) by Hennessy, Patterson Chapter 6.4, Problem 1E

### Step 1

a) Yes, decreasing the sector size during reads and writes improve performance because the online NASA database will process irregular requests for large size information. So it is difficult to handled large sector size.

# Step 2

b) No, decreasing the sector size during reads and writes improve performance because in video gaming system response time is significant. The response time reduced when sector size increased. Computer Organization and Design (4th) by Hennessy, Patterson Chapter 6.4, Problem 2E

### Step 1

#### a) Online NASA Satellite database:

The disk rotation speed improve performance because in the NASA Satellite database, increasing disk rotational speed will allow more data to be retrieved faster, for large data this improves performance.

## Step 2

#### b) Video Gaming System:

The disk rotation speed will not improve performance because in the Video Gaming System, Increasing rotational speed will allow improved performance when retrieving graphical elements from disk.

Computer Organization and Design (4th) by Hennessy, Patterson Chapter 6.4, Problem 3E

## Step 1

### a) Online NASA Satellite Database:

In online NASA satellite database would not increase disk rotation speed improve system performance because a database system that is collecting data must have exceptionally high availability, or Data loss is possible.

# Step 2

### b) Video Gaming System:

In Video Gaming System increase disk rotation speed improve system performance. Increasing disk performance in a non-critical application such as this may have benefits.