#Check for available space

fdisk -l /dev/sdb

#Create a new partition

fdisk /dev/sdb

#Then type n enter, and all default things

#Create LVM physical volume

pvcreate /dev/sdb1

#Create volume group

vgcreate savg /dev/sdb1

#Create logical volume named tmp with size of 1GB

lvcreate -L 1G -n tmp savg

#Make it ext4 file sys on tmp volume

mkfs.xfs /dev/savg/home

#Allocate 80% for home

lvcreate -l +80%FREE -n home savg

#Make it xfs file sys on home volume

mkfs.xfs /dev/savg/home

#Edit /etc/fstab and add these lines:

/dev/mapper/savg-tmp new/tmp ext4 nodev,nosuid,noexec 0 0

/dev/mapper/savg-home new/home xfs nodev 0 0

#Then do mount -a to mount them

#Move all files into new home directory

mv home/\* new/home

mv tmp/\* new/tmp

#umount both new volumes and then edit the /etc/fstab file to read:

/dev/mapper/savg-tmp /tmp ext4 nodev,nosuid,noexec 0 0

/dev/mapper/savg-home /home xfs nodev 0 0

#Now move new/tmp and new/home to /

mv new/tmp /

mv new/home /

#Do a mount -a to mount them

#Do chmod 1777 tmp to have the same permissions as the original tmp file

#This assignment took me 6 hours.