Problem 1

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Let's try this out but first let's tell R to put 4 plots on one figure. Specifically you should make one plot with each of the options for the 'type' parameter listed above. Each plot should also have a different main title clearly specifying which option you used and what it stands for. Each plot should have different values of col and lwd. Make sure that you label the x and y axes appropriately.

### Question 1a, (6 points):

Provide a .pdf of this plot.

Question 1b, (1 point):

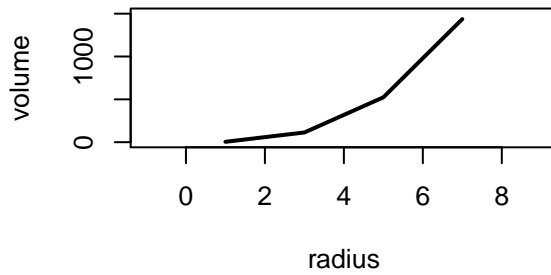provide the R code you used to make this plot.

```r
radius = c(1,3,5,7)
volume = 4/3*pi*radius^3
par(mfrow=c(2,2))
plot(radius,volume,main="Volume vs. Radius points plot",
     xlab="radius",
     ylab="volume",
     ylim=c(0,1500),xlim=c(-1,9),
     col="red",
     lwd=1,
     type = "p")
plot(radius,volume,main="Volume vs. Radius line plot",
     xlab="radius",
     ylab="volume",
     ylim=c(0,1500),xlim=c(-1,9),
     col="black",
     lwd=2,
     type = "l")
plot(radius,volume,main="Volume vs. radius \n point and line plot",
     xlab="radius",
     ylab="volume",
     ylim=c(0,1500),xlim=c(-1,9),
     col="blue",
     lwd=3,
     type = "b")
plot(radius,volume,main="Volume vs. radius not plotting",
     xlab="radius",
     ylab="volume",
     ylim=c(0,1500),xlim=c(-1,9),
     col="orange",
```
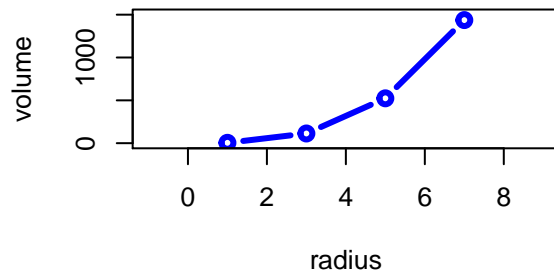
```
        lwd=4,
        type = "n")
```

Volume vs. Radius points plot

volume

1000

0

0   2   4   6   8
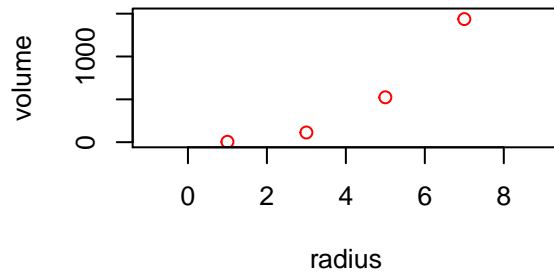
radius

Volume vs. Radius line plot

volume

1000

0

0   2   4   6   8

radius

Volume vs. radius
point and line plot

volume

1000

0

0   2   4   6   8

radius

Volume vs. radius not plotting

volume

1000

0

0   2   4   6   8

radius