```
R version 3.4.2 (2017-09-28) -- "Short Summer"
Copyright (C) 2017 The R Foundation for Statistical Computing
Platform: x86_64-apple-darwin15.6.0 (64-bit)

R is free software and comes with ABSOLUTELY NO WARRANTY.
You are welcome to redistribute it under certain conditions.
Type 'license()' or 'licence()' for distribution details.

  Natural language support but running in an English locale

R is a collaborative project with many contributors.
Type 'contributors()' for more information and
'citation()' on how to cite R or R packages in publications.

Type 'demo()' for some demos, 'help()' for on-line help, or
'help.start()' for an HTML browser interface to help.
Type 'q()' to quit R.

[R.app GUI 1.70 (7434) x86_64-apple-darwin15.6.0]

[Workspace restored from /Users/paulpartyka/.RData]
[History restored from /Users/paulpartyka/.Rapp.history]

> axon_day4_in_vitro = c(2.73,
+ 4.32,
+ 6.77,
+ 16.86,
+ 26.57,
+ 38.52,
+ 46.97,
+ 53.62,
+ 56.61,
+ 67.17,
+ 79.05,
+ 75.43,
+ 72.03,
+ 64.59,
+ 58.17,
+ 49.94,
+ 45,
+ 43.49,
+ 27.98,
+ 26.57,
+ 23.81,
+ 21.45,
+ 16.56,
+ 12.01,
+ 9.66,
```

```
+ 8.33,
+ 5.08,
+ 3.88,
+ 3.5,
+ 1.79);
> axon_in_vivo=c(37.21644,
+ 33.02387,
+ 27.8241,
+ 23.83874,
+ 19.61209,
+ 18.85316,
+ 11.41584,
+ 11.15466,
+ 9.88141,
+ 9.14164,
+ 4.48461,
+ 4.12759,
+ 3.11084,
+ 0,
+ 0,
+ 1.59114,
+ 2.77022,
+ 4.01418,
+ 4.8739,
+ 7.6668,
+ 8.1301,
+ 8.55556,
+ 14.42077,
+ 19.62226,
+ 22.29363,
+ 36.93876,
+ 38.11828,
+ 39.38242,
+ 43.2643,
+ 44.29268);
> t.test(axon_day4_in_vitro,axon_in_vivo)

    Welch Two Sample t-test

data:  axon_day4_in_vitro and axon_in_vivo
t = 2.8969, df = 45.975, p-value = 0.005753
alternative hypothesis: true difference in means is not equal to 0
95 percent confidence interval:
  4.667277 25.922057
sample estimates:
mean of x mean of y
 32.28200  16.98733

> vessel_in_vitro_day4=c(0,
```

```
+ 1.26,
+ 4.5,
+ 6.84,
+ 10.51,
+ 12.76,
+ 17.88,
+ 18.14,
+ 29.93,
+ 65.73,
+ 79.7,
+ 71.82,
+ 67.78,
+ 65.48,
+ 61.7,
+ 58.24,
+ 52.33,
+ 50.06,
+ 45,
+ 42.77,
+ 41.04,
+ 33.91,
+ 30.47,
+ 30.33,
+ 29.74,
+ 23.63,
+ 10.92,
+ 10.68,
+ 8.75,
+ 6.79);
> vessel_in_vivo=c(45.90938,
+ 14.18429,
+ 14.12792,
+ 12.69958,
+ 12.45,
+ 10.70401,
+ 9.94429,
+ 7.12502,
+ 5.23748,
+ 3.49464,
+ 1.28733,
+ 2.15296,
+ 2.31372,
+ 3.81407,
+ 5.77433,
+ 6.24837,
+ 7.37377,
+ 7.76517,
+ 8.65872,
+ 9.40634,
```

```
+ 11.30993,
+ 14.24561,
+ 14.26451,
+ 15.11347,
+ 15.56151,
+ 16.32096,
+ 21.50143,
+ 21.67465,
+ 26.56505,
+ 32.64464);
> t.test(vessel_in_vitro_day4,vessel_in_vivo)

    Welch Two Sample t-test

data:  vessel_in_vitro_day4 and vessel_in_vivo
t = 4.2905, df = 37.994, p-value = 0.0001182
alternative hypothesis: true difference in means is not equal to 0
95 percent confidence interval:
 10.71856 29.86923
sample estimates:
mean of x mean of y
 32.95633  12.66244

> vessel_in_vitro_day5=c(0.82,
+ 2.42,
+ 5.71,
+ 7.8,
+ 7.97,
+ 11.31,
+ 11.73,
+ 12.84,
+ 16.78,
+ 28.07,
+ 29.43,
+ 41.47,
+ 59.93,
+ 60.72,
+ 75.96,
+ 66.12,
+ 52.59,
+ 47.49,
+ 47.07,
+ 31.48,
+ 29.84,
+ 29.45,
+ 25.29,
+ 18.65,
+ 16.54,
+ 10.81,
```

```
+ 10.49,
+ 10.48,
+ 6.88,
+ 1.19);
> t.test(vessel_in_vitro_day5,vessel_in_vivo)

    Welch Two Sample t-test

data:  vessel_in_vitro_day5 and vessel_in_vivo
t = 3.1059, df = 40.302, p-value = 0.003467
alternative hypothesis: true difference in means is not equal to 0
95 percent confidence interval:
  4.629496 21.867627
sample estimates:
mean of x mean of y
 25.91100  12.66244

> vessel_in_vitro_day4_npc=c(2.29,
+ 4.18,
+ 10.18,
+ 12.53,
+ 13.45,
+ 14.74,
+ 22.48,
+ 25.14,
+ 33.98,
+ 40.86,
+ 43.36,
+ 50.49,
+ 56.04,
+ 60.4,
+ 62.35,
+ 64.59,
+ 70.87,
+ 64.86,
+ 57.26,
+ 49.64,
+ 38.9,
+ 24.84,
+ 24.26,
+ 20.97,
+ 19.89,
+ 8.7,
+ 6.91,
+ 6.77,
+ 5.27,
+ 2.97);
> t.test(vessel_in_vitro_day4_npc,vessel_in_vivo)
```

```
    Welch Two Sample t-test

data:  vessel_in_vitro_day4_npc and vessel_in_vivo
t = 4.0477, df = 39.336, p-value = 0.000235
alternative hypothesis: true difference in means is not equal to 0
95 percent confidence interval:
  8.995828 26.957296
sample estimates:
mean of x mean of y
 30.63900  12.66244

> normal_axon_in_vitro=c(113.58,
+ 117.46,
+ 101.98,
+ 113.96,
+ 112.78,
+ 87.44,
+ 110.58,
+ 92.15,
+ 117.05,
+ 108.42,
+ 127.12,
+ 63.33,
+ 73.17,
+ 77.76,
+ 77.16);
> axon_length_in_vivo=c(75.15053,
+ 48.05646,
+ 103.08753,
+ 81.8234,
+ 24.62524,
+ 185.97821,
+ 102.93442,
+ 57.11978,
+ 137.88595,
+ 98.19611,
+ 132.03597,
+ 151.50298,
+ 122.48865,
+ 267.41035,
+ 236.55022);
> t.test(normal_axon_in_vitro,axon_length_in_vivo)

    Welch Two Sample t-test

data:  normal_axon_in_vitro and axon_length_in_vivo
t = -1.2153, df = 16.334, p-value = 0.2415
alternative hypothesis: true difference in means is not equal to 0
95 percent confidence interval:
```

```
 -60.47740  16.35663
sample estimates:
mean of x mean of y
  99.5960  121.6564

> vessel_length_in_vivo=c(183.43858,
+ 245.95282,
+ 324.24421,
+ 298.06018,
+ 189.91221,
+ 180.08805,
+ 172.31286,
+ 629.94416,
+ 136.02003,
+ 241.58005,
+ 129.98668,
+ 85.7776,
+ 177.12794,
+ 136.71766,
+ 337.97308);
> vessel_length_in_vitro=c(227.58,
+ 223.98,
+ 187.74,
+ 303.96,
+ 141.46,
+ 275.19,
+ 260.27,
+ 189.44,
+ 195.16,
+ 169.04,
+ 180.5,
+ 189.7,
+ 181.56,
+ 175.05,
+ 178.38);
> t.test(vessel_length_in_vivo,vessel_length_in_vitro)

    Welch Two Sample t-test

data:  vessel_length_in_vivo and vessel_length_in_vitro
t = 0.72026, df = 17.1, p-value = 0.4811
alternative hypothesis: true difference in means is not equal to 0
95 percent confidence interval:
 -50.14213 102.15895
sample estimates:
mean of x mean of y
 231.2757  205.2673

>
```