Power calculation examples

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This document includes a couple examples of calculations with the `pwr` package, which you must have installed.

```
library(pwr)
```

Example discussed in 2.4.1 in the text:

- To calculate power for a two-sample t test, when sample size in each sample is $n = 16$, effect size (Cohen's d) is 0.5, at significance level $\alpha = 0.05$:

```
pwr.t.test(n=16, d=0.5, sig.level = 0.05)
```

```
##
##      Two-sample t test power calculation
##
##              n = 16
##              d = 0.5
##      sig.level = 0.05
##          power = 0.2777445
##    alternative = two.sided
##
## NOTE: n is number in *each* group
```

- Calculate what sample size would be needed to achieve power of $\beta = 0.8$ for this effect size and α:

```
pwr.t.test(d=0.5, sig.level = 0.05, power=0.8)
```

```
##
##      Two-sample t test power calculation
##
##              n = 63.76561
##              d = 0.5
##      sig.level = 0.05
##          power = 0.8
##    alternative = two.sided
##
## NOTE: n is number in *each* group
```