# Power

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### Linear

#### Scenario 1

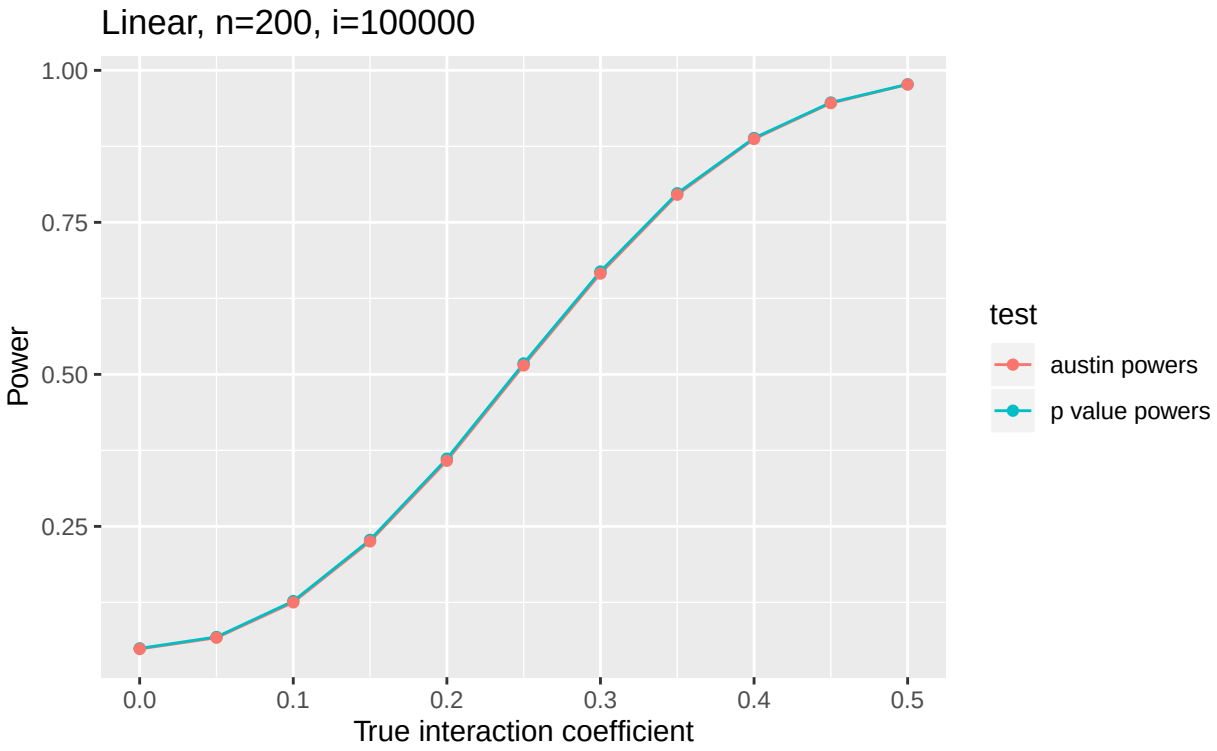
iterations = 100000 n = 200

true interaction coefficients = seq(0, 0.5, 0.05)

exp.coefs = c(I = -0.4, X = 0.01)

med.coefs = c(I = 3, Z = 2, X = 0.05, ZX = 0)

out.coefs = c(I = 5, Z = 1, M = 0.5, ZM = 0, X = 0.05, ZX = 0, MX = 0, ZMX = 0)




Estimated power differences (sum(p.values.def.test<0.05)/iter - sum(p.values.p.test<0.05)/iter) for each value of interaction:

```
##  [1] -0.00093 -0.00124 -0.00208 -0.00249 -0.00341 -0.00335 -0.00337 -0.00236
##  [9] -0.00150 -0.00099 -0.00040
```

t-test of group differences. Eftersom alla har samma tecken är det supersignifikant.

```
##
##  Paired t-test
##
## data:  austin.powers and p.value.powers
## t = -6.1884, df = 10, p-value = 0.000103
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.002734934 -0.001286884
## sample estimates:
## mean of the differences
##            -0.002010909
```