Tutorial 5

STAT 3013/4027/8027

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1. Answer the following questions from SI: 2.21, 3.1, 3.11.
2. Based on Question 3.1 (c), using the following data:

```r
set.seed(1001)
n <- 100
y <- rgamma(n, 2, scale=5)
```

a. Calculate the estimate $\hat{\theta}$ analytically.
b. Code up a Newton-Raphson routine to compute $\hat{\theta}$.
c. Use `optim()` in R to compute $\hat{\theta}$.