

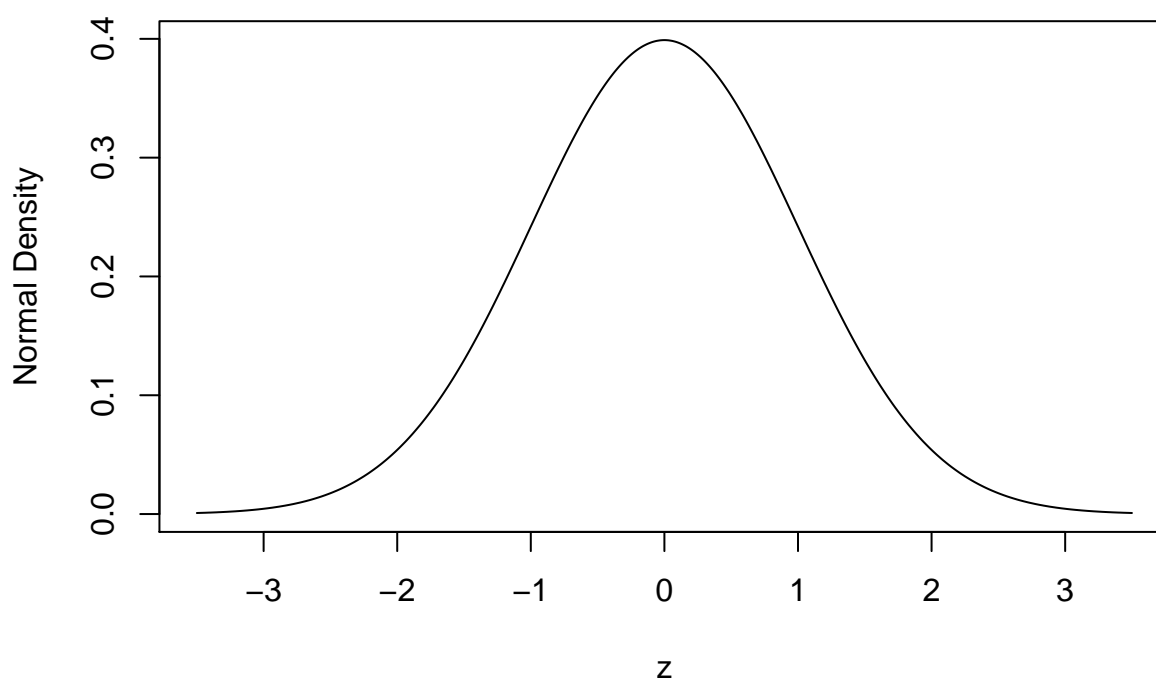
Lecture 11 - Normal and Normal Approximation

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Snippet of Code from last Friday

```
x <- seq(from = -3.5, to = 3.5, by = 0.01)
plot(x = x, y = dnorm(x), type = "l",
     xlab = "z", ylab = "Normal Density")
```



```
pnorm(q = 20, mean = 15, sd = 4, lower.tail = FALSE)
```

```
## [1] 0.1056498
```

Examples for current Friday

Example 1

Suppose we toss a fair coin 20 times. What is the probability of getting between 9 and 11 heads?

Example 2

In a particular program at Trent, 60% of students are men and 40% are women. In a random sample of 50 students what is the probability that more than half are women?

Example 3

“Skip the Dishes” finds that 70% of people order through them and ask for Chinese food, and 30% for Italian food. Last week 426 orders were made through the local, Peterborough, unit. Find the probability that at least 200 orders were for Italian food.