



R Code for Examples in the book
“Statistics: The Art and Science of Learning from Data”
by Agresti, Franklin and Klingenberg, 5th edition

Chapter 6

Example 7: Talk Time on Smartphones – Finding Normal Probabilities

To find the probability that smartphones have a talk-time 1.25 standard deviations below the mean, you can use

```
pnorm(230, mean = 330, sd = 80)
```

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

or

```
pnorm(-1.25)
```

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

To find the probability that smartphones have a talk-time 1.25 standard deviations above the mean, you can use

```
pnorm(430, mean = 330, sd = 80, lower = FALSE)
```

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

or

```
pnorm(1.25, lower = FALSE)
```

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

To find the probability that smartphones have a talk-time 1.25 standard deviations within the mean, you can use

```
pnorm(430, mean = 330, sd = 80) - pnorm(230, mean = 330, sd = 80)
```

```
## [1] 0.7887005
```

or

```
pnorm(1.25) - pnorm(-1.25)
```

```
## [1] 0.7887005
```