

## Homework 5

1.

```
> #a
> pnorm(1)-pnorm(0)
[1] 0.3413447
>
> #b
> pnorm(1.5)-pnorm(0)
[1] 0.4331928
>
> #c
> pnorm(.5)-pnorm(-1.5)
[1] 0.6246553
>
> #d
> 1-pnorm(2.1)
[1] 0.01786442
>
> #e
> 1-pnorm(-1.43)
[1] 0.9236415
>
> #f
> pnorm(2.05)
[1] 0.9798178
>
> #g
> pnorm(-1.11)-pnorm(-2.22)
[1] 0.1202901
>
> #h
> pnorm(-4.5)
[1] 3.397673e-06
```

2.

```
> ###2.
> 1-pnorm((220-200)/12)
[1] 0.04779035
>
> pnorm((205-200)/12)
[1] 0.6615389
>
> pnorm((190-200)/12)-pnorm((180-200)/12)
[1] 0.154538
```

3.

```
> ###3.
> qnorm(.1)*10+17
[1] 4.184484
>
> qnorm(.85)*10+17
[1] 27.36433
```

```
>  
> qnorm(.75)*10+17-(qnorm(.25)*10+17)  
[1] 13.4898  
4.
```

```
###4.
```

```
> qnorm((1-.5)/2)  
[1] -0.6744898
```

```
>  
> qnorm((1-.8)/2)  
[1] -1.281552
```

```
>  
> qnorm((1-.9)/2)  
[1] -1.644854
```

```
>  
> qnorm((1-.95)/2)  
[1] -1.959964
```

```
>  
> qnorm((1-.99)/2)  
[1] -2.575829
```

```
>  
> qnorm((1-.999)/2)  
[1] -3.290527
```

```
>  
> qnorm((1-.9999)/2)  
[1] -3.890592
```