Homework 7

4.54

```
a = pnorm(1.3, 0, 1) - pnorm(0.5, 0, 1)
a
```

[1] 0.2117371

```
b = pnorm(0, 0, 1) - pnorm(-1.3, 0, 1)
b
```

[1] 0.4031995

4.55

```
a = pnorm(-1.2, 0, 1) - pnorm(-2.5, 0, 1)
a
```

[1] 0.10886

```
b = pnorm(-0.7, 0, 1) - pnorm(-1.3, 0, 1)
b
```

[1] 0.1451632

4.57

```
a = pnorm(1.23, 0, 1)
a
```

[1] 0.8906514

4.60

```
a = 1 - 0.025
a
```

[1] 0.975

```
b = qnorm(a, 0, 1)
b
```

[1] 1.959964

4.61

```
a = 1 - 0.0091
a
```

[1] 0.9909

```
b = qnorm(a, 0, 1)
b
```

[1] 2.361524

4.68

```
a = qnorm(.99, 250, 50)
a
```

[1] 366.3174

```
b = qnorm(0.025, 250, 50)
b
```

[1] 152.0018

```
c1 = qnorm(0.95, 250, 50)
c1
```

[1] 332.2427

```
c2 = qnorm(0.025, 250, 50)
c2
```

[1] 152.0018

4.70

```
# mean = 513, sd = 130
a1 = (600 - 513)/130
a2 = 1 - pnorm(a1, 0, 1)
a2
```

[1] 0.2516741

```
b1 = (700 - 513)/130
b2 = 1 - pnorm(b1, 0, 1)
b2
```

[1] 0.07515157

```
c1 = (450 - 513)/130
c2 = pnorm(c1, 0, 1)
c2
```

[1] 0.3139746

```
d = pnorm(a1) - pnorm(c1)
d
```

[1] 0.4343513