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STAT 260 Assignment 2

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Part 1

1a)

```
> ppois(25, lambda = 33.75)
[1] 0.07288401
```

1b)

```
> dpois(30, lambda = 33.75)
[1] 0.05849442
```

1c)

```
> less34 = ppois(34, lambda = 33.75)
> less34
[1] 0.5624985
> greater31 = ppois(30, lambda = 33.75)
> greater31
[1] 0.2947687
> totalProb = (less34 - greater31) / greater31
> totalProb
[1] 0.9082707
```

Part 2

2a)

```
> pbinom(100,size=100,p=0.013) - pbinom(3,size=100,p=0.013)
[1] 0.04198515
```

2b)

```
> 1 - pnorm(3.5,mean=1.3,sd=1.13274)

[1] 0.02605685
```

Part 3

3a)

```
> pnorm(30.7,mean=28.3,sd=1.23) - pnorm(27.8,mean=28.3,sd=1.23)

[1] 0.6322984
```

3b)

```
> 1 - pnorm(29.5,mean=28.3,sd=1.23)

[1] 0.1646289
```

3c)

```
> totalProb = (pnorm(30.5,mean=28.3,sd=1.23) - pnorm(29,mean=28.3,sd=1.23)) /
pnorm(29,mean=28.3,sd=1.23)

> totalProb

[1] 0.3464057
```