AC_Prob_Nov-11_1

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```
library(ggplot2)
library(ggpubr)
```

For values of $\lambda = 0.1, 0.5, 1, 1.5, 10$, and for values of $x = 0, 1, 2, ..., 50$, draw poisson graphs.

```
l = c(0.1, 0.5, 1, 1.5, 10)
x = c(0:50)
x
```

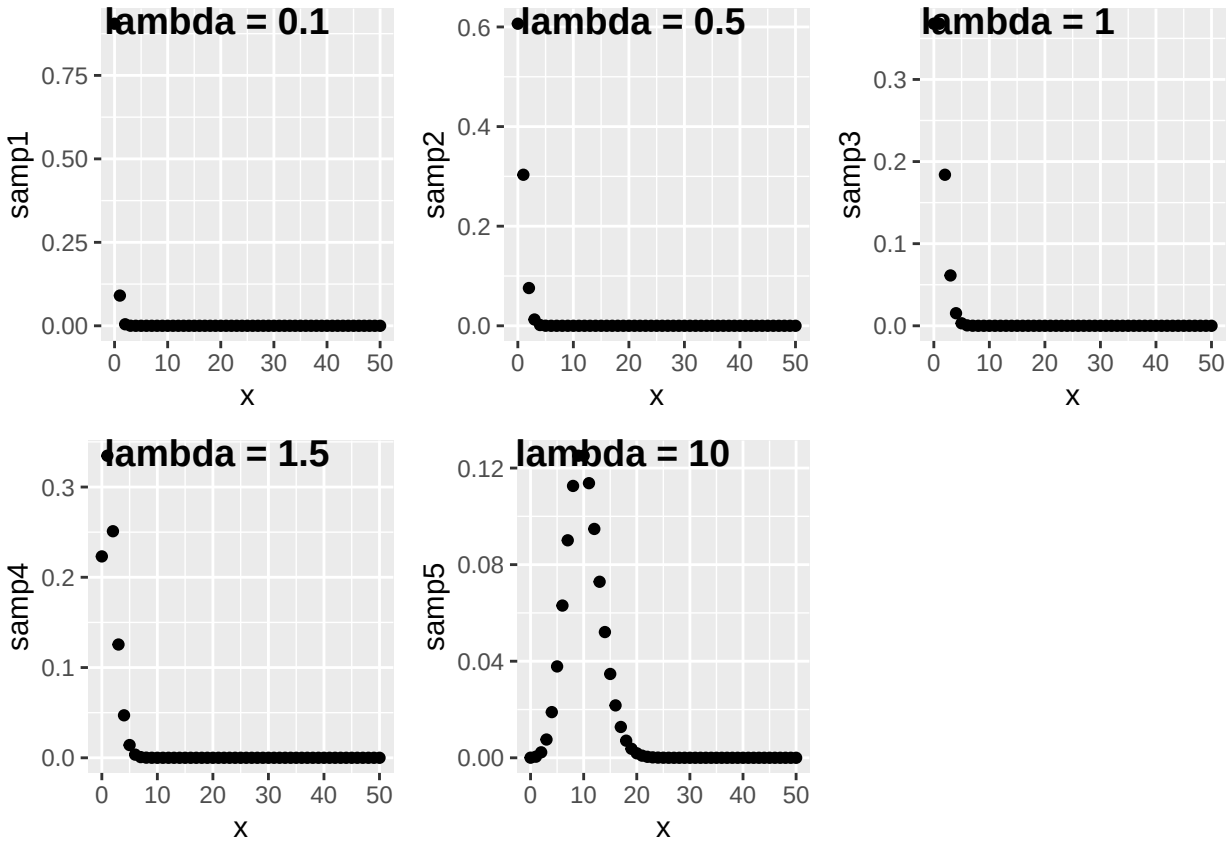
```
##  [1]  0  1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
## [26] 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49
## [51] 50
```

Calculating the poisson values:

```
samp1 = dpois(x, l[1], log = FALSE)
samp2 = dpois(x, l[2], log = FALSE)
samp3 = dpois(x, l[3], log = FALSE)
samp4 = dpois(x, l[4], log = FALSE)
samp5 = dpois(x, l[5], log = FALSE)
```

Plotting:

```
p1 = qplot(x, samp1, geom = "point")
p2 = qplot(x, samp2, geom = "point")
p3 = qplot(x, samp3, geom = "point")
p4 = qplot(x, samp4, geom = "point")
p5 = qplot(x, samp5, geom = "point")
fig = ggarrange(p1, p2, p3, p4, p5, labels = c("lambda = 0.1", "lambda = 0.5", "lambda = 1", "lambda = 
fig
```



We can see that as λ increases, the distribution tends to be symmetric.