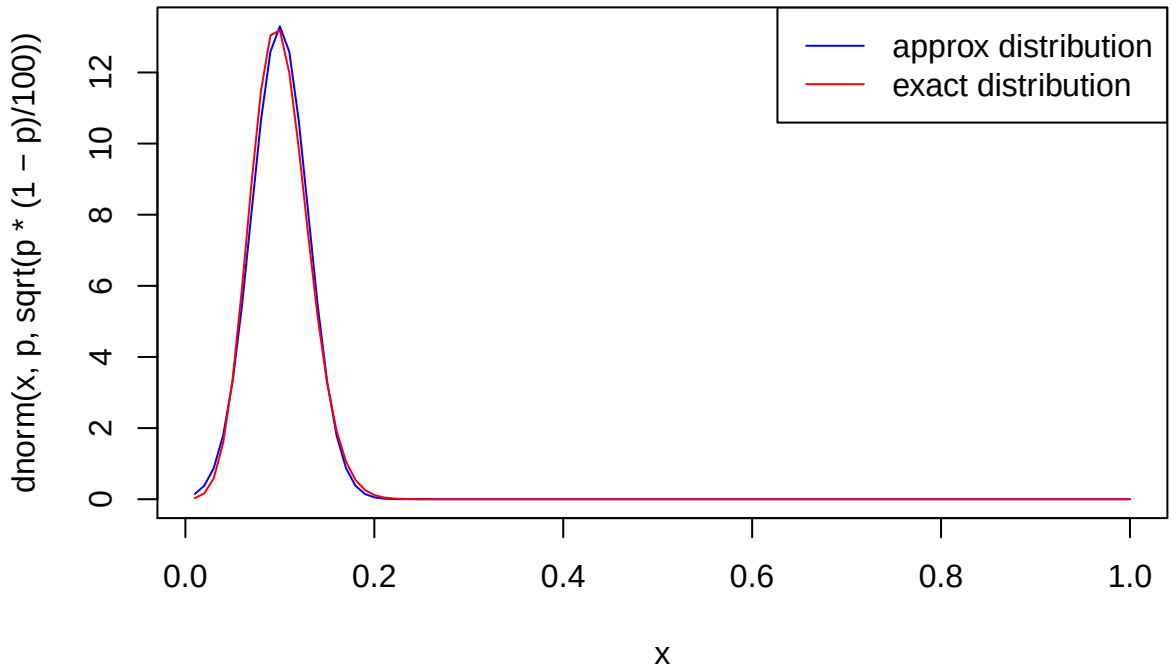
Lab 7

Andreas Dahlberg

```
p = 0.1
x = seq(0.01,1,by=0.01)
plot(x,dnorm(x,p,sqrt(p*(1-p)/100)),type="l",col="blue")
lines(x,dbinom(100*x,100,p)*100,type="l",col="red")
legend("topright",legend=c("approx distribution","exact distribution"),col=c("BLUE","RED"),lty=c(1,1))
```




```
binom.test(2,100,conf.level = 0.95)$conf.int
```

```
## [1] 0.002431337 0.070383932
## attr(,"conf.level")
## [1] 0.95
```

```
print("******")
```

```
## [1] "******"
```

```
prop.test(2,100,conf.level=0.95)$conf.int
```

```
## [1] 0.003471713 0.077363988
## attr(,"conf.level")
## [1] 0.95
```

We can see that the length of the confidence interval for binom is smaller than the length of the confidence interval for prop.test. Also, both these are non-symmetrical around p=1/50.