F-Snedecor

Natanael Magalhães Cardoso, nUSP: 8914122

13/05/2021

a) $F_{0.05,5,8}$

```r
qf(0.05, 5, 8, lower.tail=FALSE)
```

```
## [1] 3.687499
```

b) $F_{0.05,8,5}$

```r
qf(0.05, 8, 5, lower.tail=FALSE)
```

```
## [1] 4.81832
```

c) $F_{0.95,5,8}$

```r
qf(0.95, 5, 8, lower.tail=FALSE)
```

```
## [1] 0.2075412
```
```r
1 / qf(0.05, 8, 5, lower.tail=FALSE)
```

```
## [1] 0.2075412
```

d) $F_{0.95,8,5}$

```r
qf(0.95, 8, 5, lower.tail=FALSE)
```

```
## [1] 0.2711865
```
```r
1 / qf(0.05, 5, 8, lower.tail=FALSE)
```

```
## [1] 0.2711865
```

e) $F_{0.99,10,12}$

```r
qf(0.99, 10, 12, lower.tail=FALSE)
```

```
## [1] 0.2125006
```
```r
1 / qf(0.01, 12, 10, lower.tail=FALSE)
```

```
## [1] 0.2125006
```

f) $F_{0.01,10,12}$

```r
qf(0.01, 10, 12, lower.tail=FALSE)
```

```
## [1] 4.296054
```

```r
1 / qf(0.99, 12, 10, lower.tail=FALSE)
```

```
## [1] 4.296054
```

g) $P(F \leq 6, 16)$

```r
pf(6.16, 6, 4, lower.tail=TRUE)
```

```
## [1] 0.9499573
```

h) $P(0.177 \leq F \leq 4.74)$

```r
pf(4.74, 10, 5, lower.tail=TRUE) - pf(0.177, 10, 5, lower.tail=TRUE)
```

```
## [1] 0.9401842
```