Hypothese 3

Silas Nöttling & Maximilian Kuttner 14 4 2020

Deskriptive Statistik - Einzelflüge

## DESCRIPTIVES ## ## Descriptives ## ## Preis Device ## ## N 40 40 ## Missing 0 0 ## Mean 97.8 ## Median 88.0 ## Standard deviation 15.3 ## Minimum 87.0 ## Maximum 141 ##	шш		
## ## Descriptives ##	## DECCRIPTIVES		
## Descriptives ## ## Preis Device ## ## N 40 40 ## Missing 0 0 ## Mean 97.8 ## Median 88.0 ## Standard deviation 15.3 ## Minimum 87.0 ## Maximum 141 ## ## ## ## \$`Flug: Berlin-AUA` ## ## DESCRIPTIVES ##			
##			
## Preis Device ## ## N 40 40 ## Missing 0 0 ## Mean 97.8 ## Median 88.0 ## Standard deviation 15.3 ## Minimum 87.0 ## Maximum 141 ## ## ## ## ## ## ## DESCRIPTIVES ##			
## N 40 40 ## Missing 0 0 ## Mean 97.8 ## Median 88.0 ## Standard deviation 15.3 ## Minimum 87.0 ## Maximum 141 ##		Preis	Device
## Missing 0 0 ## Mean 97.8 ## Median 88.0 ## Standard deviation 15.3 ## Minimum 87.0 ## Maximum 141 ##	##		
## Mean 97.8 ## Median 88.0 ## Standard deviation 15.3 ## Minimum 87.0 ## Maximum 141 ##	## N	40	40
## Median 88.0 ## Standard deviation 15.3 ## Minimum 87.0 ## Maximum 141 ##	## Missing	0	0
## Standard deviation 15.3 ## Minimum 87.0 ## Maximum 141 ##	## Mean	97.8	
## Minimum 87.0 ## Maximum 141 ## ## ## ## ## ## DESCRIPTIVES ##	## Median	88.0	
## Maximum 141 ## ## ## ## ## ## \$`Flug: Berlin-AUA` ## ## DESCRIPTIVES ##	## Standard deviation	15.3	
## ## ## *\Flug: Berlin-AUA\ ## DESCRIPTIVES ##	## Minimum	87.0	
<pre>## ## ## \$`Flug: Berlin-AUA` ## ## DESCRIPTIVES ##</pre>	## Maximum	141	
<pre>## ## \$`Flug: Berlin-AUA` ## ## DESCRIPTIVES ##</pre>	##		
<pre>## \$`Flug: Berlin-AUA` ## ## DESCRIPTIVES ##</pre>	##		
## ## DESCRIPTIVES ##			
## DESCRIPTIVES ##	## \$`Flug: Berlin-AUA`		
##			
-	## Descriptives		
##			
## Preis Device		Preis	Device
##		40	40
## N 40 40 ## Missing 0 0			
	_	-	U
## Mean 92.8 ## Median 88.0			
## Standard deviation 12.8			
## Minimum 87.0			
## Maximum 123			
##			
##			
##			
## \$`Flug: Lissabon-AUA`			
##			
## DESCRIPTIVES			
##			
## Descriptives	## Descriptives		
##	_		
## Preis Device	##	Preis	Device
##	##		
## N 40 40	## N	40	40

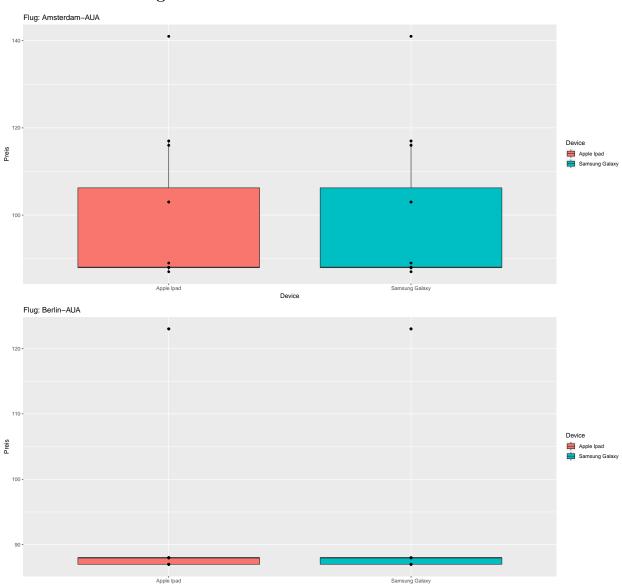
```
0
                             0
##
    Missing
##
    Mean
                         257
##
    Median
                        253
##
    Standard deviation
                        8.22
##
    Minimum
                         252
##
    Maximum
                         273
##
##
## $`Flug: London-AUA`
##
  DESCRIPTIVES
##
##
  Descriptives
##
##
                       Preis Device
##
##
     N
                        40
                                 40
                         0
##
    Missing
                                  0
##
    Mean
                         144
    Median
##
                         150
##
    Standard deviation 37.8
##
    Minimum
                        105
    Maximum
##
   _____
##
##
## $`Flug: Bangkok-AUA`
## DESCRIPTIVES
##
## Descriptives
##
##
                      Preis Device
##
##
                        40
                                 40
##
    Missing
                         0
##
    Mean
                        800
    Median
##
    Standard deviation 79.6
##
    Minimum
##
    Maximum
                         945
##
##
## $`Flug: New York-AUA`
##
##
  DESCRIPTIVES
##
##
   Descriptives
##
##
                       Preis Device
## -----
##
   N
                                  40
                          40
```

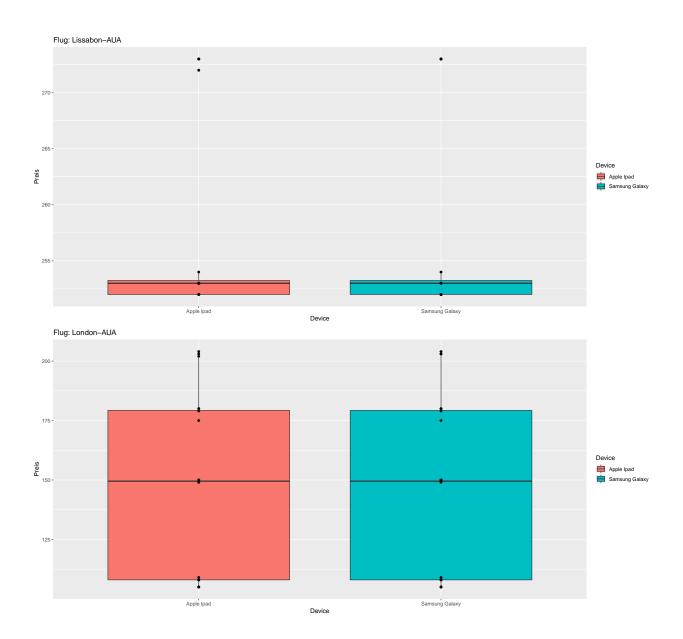
```
0
                             0
##
     Missing
##
     Mean
                         593
##
     Median
                         553
##
     Standard deviation
                         105
##
     Minimum
                         473
##
    Maximum
                         738
##
##
## $`Flug: Tokio-AUA`
##
  DESCRIPTIVES
##
##
  Descriptives
##
##
                       Preis Device
##
##
     N
                         40
                                 40
                         0
##
    Missing
                                  0
##
     Mean
                         850
     Median
##
                         823
##
    Standard deviation
##
    Minimum
                        747
##
     Maximum
                       1169
##
   _____
##
##
## $`Flug: Amsterdam-KLM`
## DESCRIPTIVES
##
## Descriptives
##
##
                      Preis Device
##
##
                         40
     N
                                 40
##
   Missing
                         0
##
    Mean
                        144
     Median
##
##
     Standard deviation 30.5
    Minimum
##
    Maximum
                         180
##
##
## $`Flug: Berlin-EZY`
##
##
  DESCRIPTIVES
##
##
   Descriptives
##
##
                      Preis Device
## -----
##
   N
                                  40
                          40
```

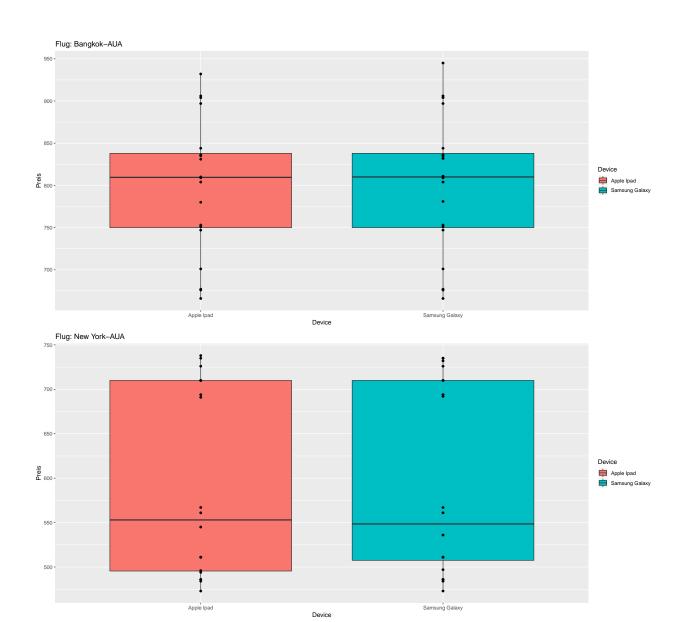
```
0
##
    Missing
                             0
                      64.3
##
    Mean
##
    Median
                      64.5
##
    Standard deviation
                      5.87
##
    Minimum
                        50.0
##
    Maximum
                       71.0
##
##
## $`Flug: Lissabon-LDM`
##
  DESCRIPTIVES
##
##
  Descriptives
##
##
                       Preis Device
##
     N
##
                        40
                                 40
                         0
##
    Missing
                                 0
##
    Mean
                        104
    Median
                        106
##
##
    Standard deviation 19.2
##
    Minimum
                       66.0
##
    Maximum
##
   _____
##
##
## $`Flug: London-BAW`
##
  DESCRIPTIVES
##
## Descriptives
##
##
                      Preis Device
##
##
    N
                        40
                                40
##
   Missing
                         0
##
    Mean
                        111
    Median
##
##
    Standard deviation 3.05
    Minimum
                        108
##
    Maximum
                        119
##
## $`Flug: Bangkok-THA`
##
##
  DESCRIPTIVES
##
##
   Descriptives
##
##
                      Preis Device
## -----
##
   N
                                  40
                          40
```

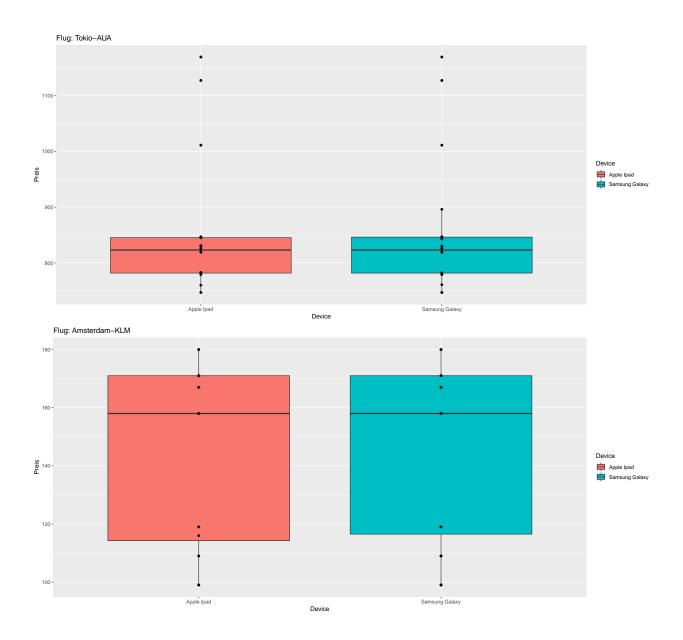
```
0
##
    Missing
                           0
##
    Mean
                       979
##
    Median
                       954
##
    Standard deviation
                     88.8
##
    Minimum
                       864
##
    Maximum
                      1193
##
##
## $`Flug: New York-UAL`
## DESCRIPTIVES
##
## Descriptives
##
                      Preis Device
##
##
##
    N
                       40
                               40
                       0
##
   Missing
                                0
##
                       620
    Mean
##
    Median
                       640
##
    Standard deviation
##
   Minimum
                       430
##
    Maximum
## -----
##
##
## $`Flug: Tokio-ANA`
## DESCRIPTIVES
##
## Descriptives
##
##
                     Preis Device
## -----
##
                       40
                               40
    N
  Missing
                                0
##
                        0
##
    Mean
                       687
    Median
##
##
    Standard deviation 62.8
##
  Minimum
##
   Maximum
                       894
```

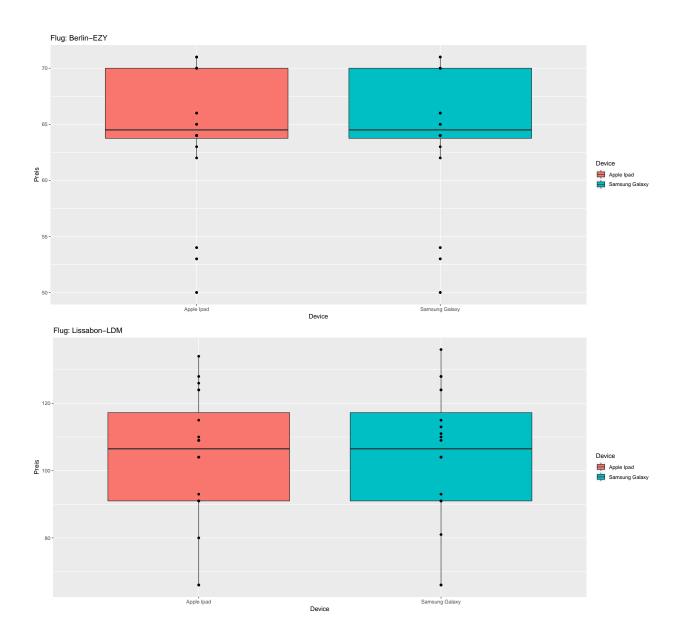
Box-Plot - Einzelflüge

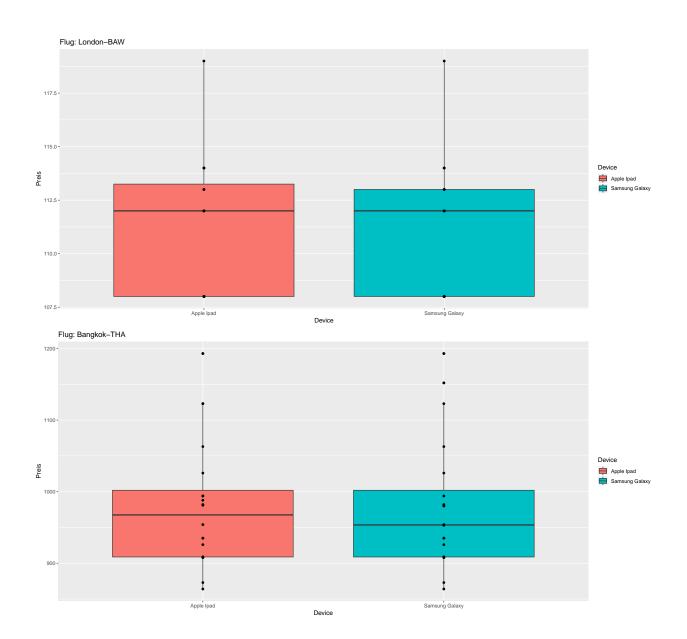


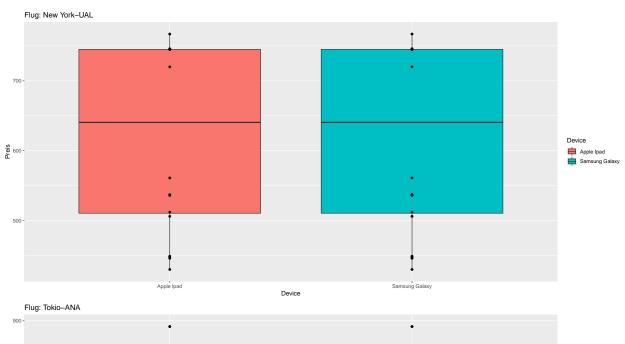


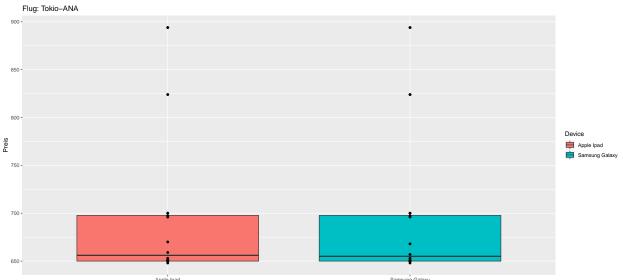












ANOVA

\$`Flug: Amsterdam-AUA` ## ## ANOVA ## ## ANOVA Sum of Squares df Mean Square F p ## ## Device 0.00 1 0.00 1.18e-29 1.000 Residuals 9141.10 38 240.56 ## Device ## ## ## ## ## ESTIMATED MARGINAL MEANS

```
##
## DEVICE
##
##
  Estimated Marginal Means - Device
##
  -----
##
    Device
                 Mean SE
                          Lower Upper
    Apple Ipad
                 97.9 3.47
##
                              90.8
                                     105
                                    105
##
    Samsung Galaxy 97.9 3.47
                             90.8
##
##
##
## $`Flug: Berlin-AUA`
##
##
  ANOVA
##
##
  ANOVA
##
             Sum of Squares df Mean Square
##
  ______
##
    Device
                    0.00
                           1
                                   0.00
                                           1.26e-29 1.000
                                169.08
##
    Residuals 6425.10 38
##
##
##
##
  ESTIMATED MARGINAL MEANS
##
##
  DEVICE
##
  Estimated Marginal Means - Device
##
##
    Device
                 Mean
                      SE
                             Lower
                                    Upper
##
##
                 92.9
                       2.91
                             87.0
    Apple Ipad
    Samsung Galaxy 92.9 2.91 87.0 98.7
##
##
##
##
## $`Flug: Lissabon-AUA`
##
##
  ANOVA
##
##
  ANOVA
             Sum of Squares df Mean Square F p
##
                                  0.0250
                   0.0250 1
                                           3.60e-4 0.985
##
    Device
   Residuals
##
                2636.7500 38
                                  69.3882
##
##
##
  ESTIMATED MARGINAL MEANS
##
##
```

DEVICE

```
##
  Estimated Marginal Means - Device
##
  _____
                        SE
##
    Device
                  Mean
                                Lower
                                        Upper
   _____
##
##

      Apple Ipad
      257
      1.86
      253
      260

      Samsung Galaxy
      257
      1.86
      253
      260

##
##
##
## $`Flug: London-AUA`
##
  ANOVA
##
##
##
  ANOVA
##
##
              Sum of Squares df Mean Square F
##
                    0.0250
##
                              1
                                      0.0250
                                              1.70e-5 0.997
    Device
    Residuals 55813.7500 38 1468.7829
##
##
##
##
##
   ESTIMATED MARGINAL MEANS
##
##
  DEVICE
##
##
   Estimated Marginal Means - Device
##
##
   Device
                   Mean SE
                               Lower Upper
##
##
    Apple Ipad
                   144 8.57
                                 127
                                         161
    Samsung Galaxy 144 8.57
                                 127
##
                                         162
##
##
##
## $`Flug: Bangkok-AUA`
##
## ANOVA
##
  ANOVA
##
   ______
              Sum of Squares df Mean Square F
##
                                      6.40
##
   Device
                       6.40
                              1
                                                9.83e-4 0.975
                                   6510.33
   Residuals 247392.70 38
##
##
##
   ESTIMATED MARGINAL MEANS
##
##
##
  DEVICE
##
## Estimated Marginal Means - Device
```

```
##
   Device
           Mean SE
                           Lower Upper
  -----
##
##
                 800
                      18.0
                             763
                                    836
    Apple Ipad
   Samsung Galaxy 801 18.0
##
                             764
##
##
## $`Flug: New York-AUA`
##
##
  ANOVA
##
  ANOVA
##
  _____
             Sum of Squares df Mean Square F p
##
##
                    21.0
                         1
                                       0.00187 0.966
                                   21.0
   Device
   Residuals 427247.8 38 11243.4
##
##
##
##
##
  ESTIMATED MARGINAL MEANS
##
##
  DEVICE
##
  Estimated Marginal Means - Device
##
  Device Mean SE Lower Upper
##
                            544 640
545 641
   Apple Ipad 592 23.7
Samsung Galaxy 593 23.7
##
                            545
##
##
##
##
## $`Flug: Tokio-AUA`
##
##
 ANOVA
##
##
  ANOVA
##
  ______
            Sum of Squares df Mean Square F
##
##
   Device
                    99.2
                          1
                                   99.2
                                         0.00720
                                               0.933
                523463.5 38
##
   Residuals
                                13775.4
##
##
##
  ESTIMATED MARGINAL MEANS
##
##
  DEVICE
##
##
##
 Estimated Marginal Means - Device
##
                Mean SE Lower Upper
##
   Device
```

```
##

      Apple Ipad
      848
      26.2
      795
      901

      Samsung Galaxy
      851
      26.2
      798
      904

##
##
##
##
##
## $`Flug: Amsterdam-KLM`
##
##
   ANOVA
##
##
   ANOVA
##
                  Sum of Squares df Mean Square F
##
##
                                      1
     Device
                              2.50
                                                     2.50
                                                             0.00263 0.959
     Residuals 36184.60 38
                                             952.23
##
##
##
##
##
    ESTIMATED MARGINAL MEANS
##
##
   DEVICE
##
##
    Estimated Marginal Means - Device
##
##
      Device
                        Mean
                               SE
                                         Lower Upper
##

      Apple Ipad
      145
      6.90
      131
      159

      Samsung Galaxy
      144
      6.90
      130
      158

##
##
##
##
##
## $`Flug: Berlin-EZY`
##
##
   ANOVA
##
##
  ANOVA
##
##
                   Sum of Squares df Mean Square F p
##
    ______
##
                              0.00
                                       1
                                                    0.00
                                                             3.79e-29 1.000
     Device
##
     Residuals
                          1344.40 38
                                                   35.38
##
##
    ESTIMATED MARGINAL MEANS
##
##
##
   DEVICE
##
##
    Estimated Marginal Means - Device
##
##
                        Mean SE Lower Upper
##
                         64.3 1.33 61.6 67.0
##
     Apple Ipad
```

```
Samsung Galaxy 64.3 1.33 61.6 67.0
##
##
##
##
## $`Flug: Lissabon-LDM`
##
##
  ANOVA
##
##
  ANOVA
##
##
             Sum of Squares df
                               Mean Square F
   ______
##
                                      3.02
                      3.02
##
    Device
                            1
                                            0.00798 0.929
##
                14412.75 38
                                   379.28
    Residuals
##
##
##
##
  ESTIMATED MARGINAL MEANS
##
  DEVICE
##
##
##
  Estimated Marginal Means - Device
##
                      SE
##
                  Mean
                              Lower
##
   ______
##
    Apple Ipad
                  104 4.35
                              95.1
                                      113
    Samsung Galaxy 104 4.35 95.1 113
##
##
##
##
## $`Flug: London-BAW`
##
  ANOVA
##
##
##
  ANOVA
##
##
             Sum of Squares df Mean Square F p
##
##
    Device
                    0.0250
                            1
                                    0.0250
                                            0.00262
                                                   0.959
##
                  362.9500 38
                                    9.5513
    Residuals
##
##
##
##
  ESTIMATED MARGINAL MEANS
##
  DEVICE
##
##
  Estimated Marginal Means - Device
##
   _____
##
                      SE
##
    Device
                 Mean
                             Lower Upper
##
    Apple Ipad 111 0.691 110 113
Samsung Galaxy 111 0.691 110 113
##
   Apple Ipad
##
```

##

```
##
##
## $`Flug: Bangkok-THA`
##
##
  ANOVA
##
##
##
               Sum of Squares df Mean Square F
##
##
     Device
                         10.0
                                1
                                          10.0
                                                  0.00124 0.972
                    307287.1 38
##
     Residuals
                                        8086.5
##
##
##
##
   ESTIMATED MARGINAL MEANS
##
  DEVICE
##
##
##
   Estimated Marginal Means - Device
##
##
                Mean SE
                                 Lower Upper
##
     Apple Ipad 979
##
                          20.1
                                    939
                                          1020
    Samsung Galaxy 978 20.1
                                   938
                                          1019
##
##
##
##
## $`Flug: New York-UAL`
##
  ANOVA
##
##
  ANOVA
##
##
                Sum of Squares df Mean Square F
##
##
                   0.00
                                      0.00
##
    Device
                               1
                                                  4.64e-30 1.000
     Residuals 662062.00 38 17422.68
##
##
##
##
   ESTIMATED MARGINAL MEANS
##
##
##
  DEVICE
##
##
   Estimated Marginal Means - Device
##
##
                           SE
                    Mean
                                  Lower
##
                     620
                           29.5
##
     Apple Ipad
                                    561
                                            680
     Apple Ipad 620 29.5 561 680 Samsung Galaxy 620 29.5 561 680
##
##
##
```

##

```
## $`Flug: Tokio-ANA`
##
##
  ANOVA
##
## ANOVA
## -----
             Sum of Squares df Mean Square F p
##
   Device 0.625 1 0.625 1.54e-4 0.990 Residuals 154038.150 38 4053.636
##
##
##
##
##
## ESTIMATED MARGINAL MEANS
##
## DEVICE
##
  Estimated Marginal Means - Device
##
  _____
##
             Mean SE
##
    Device
                             Lower Upper
  -----
##

      Apple Ipad
      687
      14.2
      658
      716

      Samsung Galaxy
      687
      14.2
      658
      716

##
##
## -----
```