R version 4.2.1 (2022-06-23 ucrt) -- "Funny-Looking Kid"

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Platform: x86\_64-w64-mingw32/x64 (64-bit)

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> library(readxl)

> Survey\_Data <- read\_excel("~/Grad School/Grad School Classes/6. Fall 2022/Business Forecasting/Assignments/Week 2/Typical\_Employee\_Survey\_Data.xlsx")

> View(Survey\_Data)

> name(Survey\_Data)

Error in name(Survey\_Data) : could not find function "name"

> names(Survey\_Data)

[1] "Age" "Gender" "Satisfaction" "JobChar" "Years" "Promote" "Decisions"

[8] "Budget" "Pride" "Stay" "Relationship"

> ncol(Survey\_Data)

[1] 11

> nrow(Survey\_Data)

[1] 122

> dim(Survey\_Data)

[1] 122 11

> head(Survey\_Data)

# A tibble: 6 × 11

Age Gender Satisfaction JobChar Years Promote Decisions Budget Pride Stay Relationship

<dbl> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl>

1 35 1 2 4 3 1 2 1 2 5 2

2 33 1 2 3 9 5 2 1 2 2 1

3 23 1 1 1 1.5 1 2 2 1 5 2

4 60 1 1 1 20 3 2 2 1 1 1

5 35 1 2 1 3 3 2 1 2 4 2

6 34 2 2 1 6 1 2 2 2 4 4

> tail(Survey\_Data)

# A tibble: 6 × 11

Age Gender Satisfaction JobChar Years Promote Decisions Budget Pride Stay Relationship

<dbl> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl>

1 49 1 2 4 1.5 5 4 1 1 1 1

2 35 2 2 2 10 4 3 2 2 5 1

3 22 1 1 5 1 1 1 2 2 4 1

4 33 2 1 5 11 5 2 1 2 2 1

5 29 2 1 5 2 2 2 1 1 2 2

6 22 1 2 2 1.25 1 2 2 2 4 2

> str(Survey\_Data)

tibble [122 × 11] (S3: tbl\_df/tbl/data.frame)

$ Age : num [1:122] 35 33 23 60 35 34 61 59 37 30 ...

$ Gender : num [1:122] 1 1 1 1 1 2 2 1 2 1 ...

$ Satisfaction: num [1:122] 2 2 1 1 2 2 1 2 1 1 ...

$ JobChar : num [1:122] 4 3 1 1 1 1 1 5 5 5 ...

$ Years : num [1:122] 3 9 1.5 20 3 6 0.75 1.5 3 5 ...

$ Promote : num [1:122] 1 5 1 3 3 1 5 2 4 2 ...

$ Decisions : num [1:122] 2 2 2 2 2 2 3 1 3 2 ...

$ Budget : num [1:122] 1 1 2 2 1 2 2 2 1 1 ...

$ Pride : num [1:122] 2 2 1 1 2 2 2 2 2 1 ...

$ Stay : num [1:122] 5 2 5 1 4 4 4 4 2 2 ...

$ Relationship: num [1:122] 2 1 2 1 2 4 1 1 3 2 ...

> class(Survey\_Data)

[1] "tbl\_df" "tbl" "data.frame"

> class(Survey\_Data$Age)

[1] "numeric"

> Survey\_Data$Age = as.factor(Survey\_Data$age)class(Survey\_Data$Age)

Error: unexpected symbol in "Survey\_Data$Age = as.factor(Survey\_Data$age)class"

> Survey\_Data$Age = as.factor(Survey\_Data$age)

Error:

! Assigned data `as.factor(Survey\_Data$age)` must be compatible with existing data.

✖ Existing data has 122 rows.

✖ Assigned data has 0 rows.

ℹ Only vectors of size 1 are recycled.

Run `rlang::last\_error()` to see where the error occurred.

Warning message:

Unknown or uninitialised column: `age`.

> Survey\_Data$Age = as.factor(Survey\_Data$Age)

> class(Survey\_Data$Age)

[1] "factor"

> str(Survey\_Data)

tibble [122 × 11] (S3: tbl\_df/tbl/data.frame)

$ Age : Factor w/ 38 levels "20","22","23",..: 15 13 3 35 15 14 36 34 17 10 ...

$ Gender : num [1:122] 1 1 1 1 1 2 2 1 2 1 ...

$ Satisfaction: num [1:122] 2 2 1 1 2 2 1 2 1 1 ...

$ JobChar : num [1:122] 4 3 1 1 1 1 1 5 5 5 ...

$ Years : num [1:122] 3 9 1.5 20 3 6 0.75 1.5 3 5 ...

$ Promote : num [1:122] 1 5 1 3 3 1 5 2 4 2 ...

$ Decisions : num [1:122] 2 2 2 2 2 2 3 1 3 2 ...

$ Budget : num [1:122] 1 1 2 2 1 2 2 2 1 1 ...

$ Pride : num [1:122] 2 2 1 1 2 2 2 2 2 1 ...

$ Stay : num [1:122] 5 2 5 1 4 4 4 4 2 2 ...

$ Relationship: num [1:122] 2 1 2 1 2 4 1 1 3 2 ...

> Survey\_Data$Satisfaction

[1] 2 2 1 1 2 2 1 2 1 1 1 2 2 1 3 2 2 2 1 1 1 4 1 2 2 2 1 4 1 1 2 1 1 3 1 1 2 1 3 2 2 1 4 2 1 1 1 1 4 2 2 1 2 2 1 1 1 3

[59] 2 1 4 2 2 1 1 2 1 1 2 1 1 1 2 2 3 2 2 1 1 1 2 1 2 1 1 1 1 1 3 2 2 1 1 2 2 1 2 1 1 1 1 1 1 1 2 4 1 1 1 2 1 4 1 1 2 1

[117] 2 2 1 1 1 2

> Survey\_Data[3]

# A tibble: 122 × 1

Satisfaction

<dbl>

1 2

2 2

3 1

4 1

5 2

6 2

7 1

8 2

9 1

10 1

# … with 112 more rows

# ℹ Use `print(n = ...)` to see more rows

> print(n=20)

Error in print.default(n = 20) : argument "x" is missing, with no default

> Survey\_Data[3]print(n=20)

Error: unexpected symbol in "Survey\_Data[3]print"

> Survey\_Data[3]'print(n=20)'

Error: unexpected string constant in "Survey\_Data[3]'print(n=20)'"

> Survey\_Data[3] %>% print(n=20)

Error in Survey\_Data[3] %>% print(n = 20) : could not find function "%>%"

> Survey\_Data %>% print(n=20)

Error in Survey\_Data %>% print(n = 20) : could not find function "%>%"

> Survey\_Data print(n=20)

Error: unexpected symbol in "Survey\_Data print"

> Survey\_Data[c("Gender")]

# A tibble: 122 × 1

Gender

<dbl>

1 1

2 1

3 1

4 1

5 1

6 2

7 2

8 1

9 2

10 1

# … with 112 more rows

# ℹ Use `print(n = ...)` to see more rows

> Survey\_Data[2:3]

# A tibble: 122 × 2

Gender Satisfaction

<dbl> <dbl>

1 1 2

2 1 2

3 1 1

4 1 1

5 1 2

6 2 2

7 2 1

8 1 2

9 2 1

10 1 1

# … with 112 more rows

# ℹ Use `print(n = ...)` to see more rows

> Survey\_Data[c("Gender","Relationship")]

# A tibble: 122 × 2

Gender Relationship

<dbl> <dbl>

1 1 2

2 1 1

3 1 2

4 1 1

5 1 2

6 2 4

7 2 1

8 1 1

9 2 3

10 1 2

# … with 112 more rows

# ℹ Use `print(n = ...)` to see more rows

> Survey\_Data[3,]

# A tibble: 1 × 11

Age Gender Satisfaction JobChar Years Promote Decisions Budget Pride Stay Relationship

<fct> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl>

1 23 1 1 1 1.5 1 2 2 1 5 2

> Survey\_Data[2:3,c("Years")]

# A tibble: 2 × 1

Years

<dbl>

1 9

2 1.5

> Survey\_Data[2:3,2:3]

# A tibble: 2 × 2

Gender Satisfaction

<dbl> <dbl>

1 1 2

2 1 1

> Survey\_Data$Promote

[1] 1 5 1 3 3 1 5 2 4 2 4 2 2 1 4 5 2 4 3 5 1 4 1 1 1 2 5 5 5 5 1 1 1 2 5 5 2 5 5 2 1 2 4 2 5 5 4 4 1 1 4 4 2 3 2 1 4 4

[59] 2 4 4 2 5 2 2 2 2 1 4 1 5 4 5 3 4 5 5 5 2 4 4 5 2 5 5 2 2 2 5 5 4 5 1 4 4 5 2 2 1 5 2 5 4 4 5 4 4 5 3 5 5 5 4 5 4 5

[117] 5 4 1 5 2 1

> table(Survey\_Data$JobChar)

1 2 3 4 5

26 8 6 18 64

> table(Survey\_Data$JobChar, Survey\_Data$Satisfaction)

1 2 3 4

1 13 10 2 1

2 5 2 0 1

3 2 4 0 0

4 10 7 1 0

5 35 21 3 5

> Survey\_Data, print(n=20)

Error: unexpected ',' in "Survey\_Data,"

> Survey\_Data[Survey\_Data$Years == "20",]

# A tibble: 1 × 11

Age Gender Satisfaction JobChar Years Promote Decisions Budget Pride Stay Relationship

<fct> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl>

1 60 1 1 1 20 3 2 2 1 1 1

> Survey\_Data[order(Survey\_Data$Years),]

# A tibble: 122 × 11

Age Gender Satisfaction JobChar Years Promote Decisions Budget Pride Stay Relationship

<fct> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl>

1 52 1 3 5 0.08 5 3 2 2 4 1

2 28 2 2 5 0.16 2 3 2 2 5 2

3 45 1 2 5 0.58 4 2 1 2 4 3

4 44 1 1 4 0.66 5 3 1 1 5 1

5 61 2 1 1 0.75 5 3 2 2 4 1

6 23 2 1 2 0.75 1 3 1 1 1 1

7 41 1 3 1 1 4 2 2 4 5 3

8 39 2 1 5 1 5 3 1 1 1 1

9 29 1 2 5 1 1 1 1 3 4 2

10 23 1 2 1 1 1 2 2 3 4 1

# … with 112 more rows

# ℹ Use `print(n = ...)` to see more rows

> Survey\_Data[order(~Survey\_Data$Years),]

# A tibble: 2 × 11

Age Gender Satisfaction JobChar Years Promote Decisions Budget Pride Stay Relationship

<fct> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl>

1 35 1 2 4 3 1 2 1 2 5 2

2 33 1 2 3 9 5 2 1 2 2 1

Warning message:

In is.na(x) : is.na() applied to non-(list or vector) of type 'language'

> names(Survey\_Data)[7] = "Decison"

> head(Survey\_Data)

# A tibble: 6 × 11

Age Gender Satisfaction JobChar Years Promote Decison Budget Pride Stay Relationship

<fct> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl>

1 35 1 2 4 3 1 2 1 2 5 2

2 33 1 2 3 9 5 2 1 2 2 1

3 23 1 1 1 1.5 1 2 2 1 5 2

4 60 1 1 1 20 3 2 2 1 1 1

5 35 1 2 1 3 3 2 1 2 4 2

6 34 2 2 1 6 1 2 2 2 4 4

> names(Survey\_Data)[7] = "Decisons"

> head(Survey\_Data)

# A tibble: 6 × 11

Age Gender Satisfaction JobChar Years Promote Decisons Budget Pride Stay Relationship

<fct> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl>

1 35 1 2 4 3 1 2 1 2 5 2

2 33 1 2 3 9 5 2 1 2 2 1

3 23 1 1 1 1.5 1 2 2 1 5 2

4 60 1 1 1 20 3 2 2 1 1 1

5 35 1 2 1 3 3 2 1 2 4 2

6 34 2 2 1 6 1 2 2 2 4 4

> Survey\_Data[1,1 = 140]

Error: unexpected '=' in "Survey\_Data[1,1 ="

> Survey\_Data[1,1] = 140

Error:

! Assigned data `140` must be compatible with existing data.

ℹ Error occurred for column `Age`.

✖ Can't convert <double> to <factor<787c7>>.

Run `rlang::last\_error()` to see where the error occurred.

> Survey\_Data[1,5] = 140

> head(Survey\_Data)

# A tibble: 6 × 11

Age Gender Satisfaction JobChar Years Promote Decisons Budget Pride Stay Relationship

<fct> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl>

1 35 1 2 4 140 1 2 1 2 5 2

2 33 1 2 3 9 5 2 1 2 2 1

3 23 1 1 1 1.5 1 2 2 1 5 2

4 60 1 1 1 20 3 2 2 1 1 1

5 35 1 2 1 3 3 2 1 2 4 2

6 34 2 2 1 6 1 2 2 2 4 4

> Survey\_Data[1,5] = 3

> head(Survey\_Data)

# A tibble: 6 × 11

Age Gender Satisfaction JobChar Years Promote Decisons Budget Pride Stay Relationship

<fct> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl>

1 35 1 2 4 3 1 2 1 2 5 2

2 33 1 2 3 9 5 2 1 2 2 1

3 23 1 1 1 1.5 1 2 2 1 5 2

4 60 1 1 1 20 3 2 2 1 1 1

5 35 1 2 1 3 3 2 1 2 4 2

6 34 2 2 1 6 1 2 2 2 4 4

> barplot(Survey\_Data$Years)

> barplot(Survey\_Data$Years, main "Age of Employees", xlab= "Employees", ylab= "Age", col = "Purple", names.arg = Survey\_Data$Gender)

Error: unexpected string constant in "barplot(Survey\_Data$Years, main "Age of Employees""

> barplot(Survey\_Data$Years, main = "Age of Employees", xlab= "Employees", ylab= "Age", col = "Purple", names.arg = Survey\_Data$Gender)

> pie(Survey\_Data$Satisfaction)

> pie(Survey\_Data$Gender)

> pie(Survey\_Data$Satisfaction, label = Survey\_Data$Age, main = "Job Satisfaction")

> stem(Survey\_Data$Satisfaction)

The decimal point is 1 digit(s) to the left of the |

10 | 00000000000000000000000000000000000000000000000000000000000000000

12 |

14 |

16 |

18 |

20 | 00000000000000000000000000000000000000000000

22 |

24 |

26 |

28 |

30 | 000000

32 |

34 |

36 |

38 |

40 | 0000000

> stem(Survey\_Data$Years)

The decimal point is 1 digit(s) to the right of the |

0 | 001111111111111111122222222222222222333333333333344444444

0 | 555555566666666777778999

1 | 000000000111111222234

1 | 56689

2 | 0122334

2 | 6799

3 | 24

3 | 6

4 |

4 |

5 | 2

> hist(Survey\_Data$Age)

Error in hist.default(Survey\_Data$Age) : 'x' must be numeric

> hist(Survey\_Data$Satisfaction)

> boxplot(Survey\_DataAge)

Error in boxplot(Survey\_DataAge) : object 'Survey\_DataAge' not found

> boxplot(Survey\_Data$Age)

> boxplot(Survey\_Data$Age,Survey\_Data$Gender)

> min(Survey\_Data$Age)

Error in Summary.factor(c(15L, 13L, 3L, 35L, 15L, 14L, 36L, 34L, 17L, :

‘min’ not meaningful for factors

> min(Survey\_Data$Satisfaction)

[1] 1

> Max(Survey\_Data$Years)

Error in Max(Survey\_Data$Years) : could not find function "Max"

> max(Survey\_Data$Years)

[1] 52.25

> range(Survey\_Data$Years)

[1] 0.08 52.25

> StatRange = max(Survey\_Data$Years) - min(Survey\_Data$Years)

> StatRange

[1] 52.17

> mean(survey)

Error in mean(survey) : object 'survey' not found

> mean(Survey\_Data$Years)

[1] 8.223525

> sd(Survey\_Data$Years)

[1] 8.9839

> var(Survey\_Data$Years)

[1] 80.71046

> sqrt(var(Survey\_Data$Years))

[1] 8.9839

> fivenum(Survey\_Data$Years)

[1] 0.08 2.00 5.00 11.00 52.25

> IQR(Survey\_Data$Years)

[1] 9

> quartile(Survey\_Data$Years)

Error in quartile(Survey\_Data$Years) : could not find function "quartile"

> quantile(Survey\_Data$Years)

0% 25% 50% 75% 100%

0.08 2.00 5.00 11.00 52.25

> summary(Survey\_Data$Years)

Min. 1st Qu. Median Mean 3rd Qu. Max.

0.080 2.000 5.000 8.224 11.000 52.250

> boxplot.stats(Survey\_Data$Years)

$stats

[1] 0.08 2.00 5.00 11.00 24.00

$n

[1] 122

$conf

[1] 3.712582 6.287418

$out

[1] 36.00 52.25 27.00 31.91 29.00 34.00 26.00 29.25

> boxplot.stats(Survey\_Data$Years)$out

[1] 36.00 52.25 27.00 31.91 29.00 34.00 26.00 29.25

> summary(Survey\_Data)

Age Gender Satisfaction JobChar Years Promote Decisons

39 : 9 Min. :1.000 Min. :1.000 Min. :1.000 Min. : 0.080 Min. :1.000 Min. :1.000

33 : 7 1st Qu.:1.000 1st Qu.:1.000 1st Qu.:2.000 1st Qu.: 2.000 1st Qu.:2.000 1st Qu.:2.000

34 : 7 Median :1.000 Median :1.000 Median :5.000 Median : 5.000 Median :4.000 Median :2.000

36 : 7 Mean :1.426 Mean :1.631 Mean :3.705 Mean : 8.224 Mean :3.287 Mean :2.279

32 : 5 3rd Qu.:2.000 3rd Qu.:2.000 3rd Qu.:5.000 3rd Qu.:11.000 3rd Qu.:5.000 3rd Qu.:3.000

40 : 5 Max. :2.000 Max. :4.000 Max. :5.000 Max. :52.250 Max. :5.000 Max. :4.000

(Other):82

Budget Pride Stay Relationship

Min. :1.000 Min. :1.000 Min. :1.000 Min. :1.000

1st Qu.:1.000 1st Qu.:1.000 1st Qu.:2.000 1st Qu.:1.000

Median :1.000 Median :2.000 Median :4.000 Median :2.000

Mean :1.451 Mean :1.787 Mean :3.254 Mean :1.787

3rd Qu.:2.000 3rd Qu.:2.000 3rd Qu.:4.000 3rd Qu.:2.000

Max. :2.000 Max. :4.000 Max. :5.000 Max. :4.000

> by(Survey\_Data$Years)

Error in by.default(Survey\_Data$Years) :

argument "INDICES" is missing, with no default

> by(Survey\_Data$Age,Survey\_Data$Gender,mean)

Survey\_Data$Gender: 1

[1] NA

------------------------------------------------------------------------------------------

Survey\_Data$Gender: 2

[1] NA

Warning messages:

1: In mean.default(dd[x, ], ...) :

argument is not numeric or logical: returning NA

2: In mean.default(dd[x, ], ...) :

argument is not numeric or logical: returning NA

> by(Survey\_Data$Age,Survey\_Data$Gender,sd)

Error in var(if (is.vector(x) || is.factor(x)) x else as.double(x), na.rm = na.rm) :

Calling var(x) on a factor x is defunct.

Use something like 'all(duplicated(x)[-1L])' to test for a constant vector.

> by(Survey\_Data$Years,Survey\_Data$Gender,sd)

Survey\_Data$Gender: 1

[1] 10.27386

------------------------------------------------------------------------------------------

Survey\_Data$Gender: 2

[1] 6.929047

> by(Survey\_Data$Years,Survey\_Data$Gender,mean)

Survey\_Data$Gender: 1

[1] 8.680286

------------------------------------------------------------------------------------------

Survey\_Data$Gender: 2

[1] 7.608654

> by(Survey\_Data$Years,Survey\_Data$Gender,summary)

Survey\_Data$Gender: 1

Min. 1st Qu. Median Mean 3rd Qu. Max.

0.08 2.00 5.00 8.68 11.00 52.25

------------------------------------------------------------------------------------------

Survey\_Data$Gender: 2

Min. 1st Qu. Median Mean 3rd Qu. Max.

0.160 2.000 6.000 7.609 10.250 29.250

> by(Survey\_Data$Years,Survey\_Data$Gender,median)

Survey\_Data$Gender: 1

[1] 5

------------------------------------------------------------------------------------------

Survey\_Data$Gender: 2

[1] 6

> aggregate(Survey\_Data$Gender,list"Type" = Survey\_Data$Years), median

Error: unexpected string constant in "aggregate(Survey\_Data$Gender,list"Type""

> aggregate(Survey\_Data$Gender,list"Type" = Survey\_Data$Years), median)

Error: unexpected string constant in "aggregate(Survey\_Data$Gender,list"Type""

> aggregate(Survey\_Data$Age,list"Type" = Survey\_Data$Years), median)

Error: unexpected string constant in "aggregate(Survey\_Data$Age,list"Type""

> aggregate(Survey\_Data$Age,list("Type" = Survey\_Data$Years), median)

Error in median.default(X[[i]], ...) : need numeric data

> aggregate(Survey\_Data$Satisfaction,list("Type" = Survey\_Data$Years), median)

Type x

1 0.08 3.0

2 0.16 2.0

3 0.58 2.0

4 0.66 1.0

5 0.75 1.0

6 1.00 2.0

7 1.25 2.0

8 1.50 1.5

9 1.66 1.0

10 1.91 1.0

11 2.00 1.0

12 2.08 1.0

13 2.33 1.0

14 2.50 1.0

15 2.66 1.0

16 3.00 2.0

17 3.25 1.0

18 3.50 1.0

19 3.75 2.0

20 4.00 1.0

21 4.08 4.0

22 4.33 1.0

23 5.00 1.0

24 5.50 1.0

25 6.00 1.5

26 7.00 2.0

27 8.00 2.0

28 9.00 2.0

29 9.50 4.0

30 10.00 2.0

31 11.00 2.0

32 11.25 1.0

33 11.83 2.0

34 12.00 2.0

35 13.00 1.0

36 14.00 2.0

37 15.00 1.0

38 16.00 1.5

39 18.00 1.0

40 19.00 2.0

41 20.00 1.0

42 21.00 2.0

43 22.00 1.5

44 22.50 3.0

45 23.00 2.0

46 24.00 1.0

47 26.00 1.0

48 27.00 1.0

49 29.00 1.0

50 29.25 2.0

51 31.91 1.0

52 34.00 1.0

53 36.00 2.0

54 52.25 1.0

> aggregate(Survey\_Data$Satisfaction,list("Type" = Survey\_Data$Years), summary)

Type x.Min. x.1st Qu. x.Median x.Mean x.3rd Qu. x.Max.

1 0.08 3.000000 3.000000 3.000000 3.000000 3.000000 3.000000

2 0.16 2.000000 2.000000 2.000000 2.000000 2.000000 2.000000

3 0.58 2.000000 2.000000 2.000000 2.000000 2.000000 2.000000

4 0.66 1.000000 1.000000 1.000000 1.000000 1.000000 1.000000

5 0.75 1.000000 1.000000 1.000000 1.000000 1.000000 1.000000

6 1.00 1.000000 1.000000 2.000000 1.833333 2.000000 4.000000

7 1.25 2.000000 2.000000 2.000000 2.000000 2.000000 2.000000

8 1.50 1.000000 1.000000 1.500000 1.500000 2.000000 2.000000

9 1.66 1.000000 1.000000 1.000000 1.000000 1.000000 1.000000

10 1.91 1.000000 1.000000 1.000000 1.000000 1.000000 1.000000

11 2.00 1.000000 1.000000 1.000000 2.000000 3.000000 4.000000

12 2.08 1.000000 1.000000 1.000000 1.000000 1.000000 1.000000

13 2.33 1.000000 1.000000 1.000000 1.000000 1.000000 1.000000

14 2.50 1.000000 1.000000 1.000000 1.000000 1.000000 1.000000

15 2.66 1.000000 1.000000 1.000000 1.000000 1.000000 1.000000

16 3.00 1.000000 1.000000 2.000000 1.888889 2.000000 4.000000

17 3.25 1.000000 1.000000 1.000000 1.000000 1.000000 1.000000

18 3.50 1.000000 1.000000 1.000000 1.000000 1.000000 1.000000

19 3.75 2.000000 2.000000 2.000000 2.000000 2.000000 2.000000

20 4.00 1.000000 1.000000 1.000000 1.250000 1.250000 2.000000

21 4.08 4.000000 4.000000 4.000000 4.000000 4.000000 4.000000

22 4.33 1.000000 1.000000 1.000000 1.000000 1.000000 1.000000

23 5.00 1.000000 1.000000 1.000000 1.142857 1.000000 2.000000

24 5.50 1.000000 1.000000 1.000000 1.000000 1.000000 1.000000

25 6.00 1.000000 1.000000 1.500000 1.666667 2.000000 3.000000

26 7.00 1.000000 1.000000 2.000000 1.600000 2.000000 2.000000

27 8.00 2.000000 2.000000 2.000000 2.000000 2.000000 2.000000

28 9.00 1.000000 1.500000 2.000000 2.000000 2.500000 3.000000

29 9.50 4.000000 4.000000 4.000000 4.000000 4.000000 4.000000

30 10.00 1.000000 1.000000 2.000000 1.750000 2.000000 3.000000

31 11.00 1.000000 1.000000 2.000000 2.000000 2.000000 4.000000

32 11.25 1.000000 1.000000 1.000000 1.000000 1.000000 1.000000

33 11.83 2.000000 2.000000 2.000000 2.000000 2.000000 2.000000

34 12.00 1.000000 1.500000 2.000000 1.666667 2.000000 2.000000

35 13.00 1.000000 1.000000 1.000000 1.000000 1.000000 1.000000

36 14.00 2.000000 2.000000 2.000000 2.000000 2.000000 2.000000

37 15.00 1.000000 1.000000 1.000000 1.000000 1.000000 1.000000

38 16.00 1.000000 1.250000 1.500000 1.500000 1.750000 2.000000

39 18.00 1.000000 1.000000 1.000000 1.000000 1.000000 1.000000

40 19.00 2.000000 2.000000 2.000000 2.000000 2.000000 2.000000

41 20.00 1.000000 1.000000 1.000000 1.000000 1.000000 1.000000

42 21.00 2.000000 2.000000 2.000000 2.000000 2.000000 2.000000

43 22.00 1.000000 1.250000 1.500000 1.500000 1.750000 2.000000

44 22.50 3.000000 3.000000 3.000000 3.000000 3.000000 3.000000

45 23.00 2.000000 2.000000 2.000000 2.000000 2.000000 2.000000

46 24.00 1.000000 1.000000 1.000000 1.000000 1.000000 1.000000

47 26.00 1.000000 1.000000 1.000000 1.000000 1.000000 1.000000

48 27.00 1.000000 1.000000 1.000000 1.000000 1.000000 1.000000

49 29.00 1.000000 1.000000 1.000000 1.000000 1.000000 1.000000

50 29.25 2.000000 2.000000 2.000000 2.000000 2.000000 2.000000

51 31.91 1.000000 1.000000 1.000000 1.000000 1.000000 1.000000

52 34.00 1.000000 1.000000 1.000000 1.000000 1.000000 1.000000

53 36.00 2.000000 2.000000 2.000000 2.000000 2.000000 2.000000

54 52.25 1.000000 1.000000 1.000000 1.000000 1.000000 1.000000