

This is the data file opened in the RStudio program that I will use for this exercise.

```
{r}
read1<-read_excel("sales1.xlsx")
print(read1)
```

A tibble: 29 x 11

Region <chr>	Item Type <chr>	Sales Channel <chr>
Sub-Saharan Africa	Household	Offline
Europe	Baby Food	Online
Europe	Meat	Online
Europe	Meat	Online
Europe	Cereal	Online
Asia	Meat	Online
Sub-Saharan Africa	Household	Online
Europe	Household	Online
Sub-Saharan Africa	Cosmetics	Offline
Sub-Saharan Africa	Cosmetics	Online

1-10 of 29 rows | 1-3 of 11 columns

Previous 1 2 3 Next

```
{r}
read1<-read_excel("sales1.xlsx")
print(read1)
```

A tibble: 29 x 11

Order Date <S3: POSIXct>	Order ID <dbl>	Units Sold <dbl>	Unit Price <dbl>	Unit Cost <dbl>
2015-08-31	897751939	3604	668.27	502.54
2010-11-20	599480426	8435	255.28	159.42
2017-06-22	538911855	4848	421.89	364.69
2012-02-28	459845054	7225	421.89	364.69
2010-08-12	626391351	1975	205.70	117.11
2010-08-20	472974574	2542	421.89	364.69
2011-02-03	854331052	4398	668.27	502.54
2015-09-11	895509612	49	668.27	502.54
2014-01-31	241871583	4031	437.20	263.33
2015-11-21	409090793	7911	437.20	263.33

1-10 of 29 rows | 4-8 of 11 columns

Previous **1** 2 3 Next

```
{r}
read1<-read_excel("sales1.xlsx")
print(read1)
```

A tibble: 29 x 11

Unit Price <dbl>	Unit Cost <dbl>	Total Revenue <dbl>	Total Cost <dbl>	Total Profit <dbl>
668.27	502.54	2408445.08	1811154.16	597290.92
255.28	159.42	2153286.80	1344707.70	808579.10
421.89	364.69	2045322.72	1768017.12	277305.60
421.89	364.69	3048155.25	2634885.25	413270.00
205.70	117.11	406257.50	231292.25	174965.25
421.89	364.69	1072444.38	927041.98	145402.40
668.27	502.54	2939051.46	2210170.92	728880.54
668.27	502.54	32745.23	24624.46	8120.77
437.20	263.33	1762353.20	1061483.23	700869.97
437.20	263.33	3458689.20	2083203.63	1375485.57

1-10 of 29 rows | 7-11 of 11 columns

Previous **1** 2 3 Next

```
{r}  
dim(read1)
```

```
[1] 29 11
```

```
{r}  
str(read1)
```

```
Classes 'tbl_df', 'tbl' and 'data.frame':    29 obs. of  11 variables:  
 $ Region      : chr  "Sub-Saharan Africa" "Europe" "Europe" "Europe" ...  
 $ Item Type    : chr  "Household" "Baby Food" "Meat" "Meat" ...  
 $ Sales Channel: chr  "Offline" "Online" "Online" "Online" ...  
 $ Order Date   : POSIXct, format: "2015-08-31" "2010-11-20" ...  
 $ Order ID     : num   8.98e+08 5.99e+08 5.39e+08 4.60e+08 6.26e+08 ...  
 $ Units Sold   : num   3604 8435 4848 7225 1975 ...  
 $ Unit Price   : num   668 255 422 422 206 ...  
 $ Unit Cost    : num   503 159 365 365 117 ...  
 $ Total Revenue: num  2408445 2153287 2045323 3043155 406258 ...  
 $ Total Cost   : num  1811154 1344708 1768017 2634885 231292 ...  
 $ Total Profit : num   597291 808579 277306 413270 174965 ...  
 NULL
```

For example we choose from this table N3 "Europe"

sales1 [Protected View] - Excel (Unlicensed Product)

File Home Insert Page Layout Formulas Data Review View Help Tell me what you want to do

PROTECTED VIEW Be careful—files from the Internet can contain viruses. Unless you need to edit, it's safer to stay in Protected View. [Enable Editing](#)

A3 Europe

	A	B	C	D	E	F	G	H	I	J	K
1	Region	Item Type	Sales Char	Order Date	Order ID	Units Sold	Unit Price	Unit Cost	Total Revenue	Total Cost	Total Profit
2	Sub-Sahar	Household	Offline	2015-08-31	897751939	3604	668.27	502.54	2408445.08	1811154.16	597290.92
3	Europe	Baby Food	Online	2010-11-20	599480426	8435	255.28	159.42	2153286.8	1344707.7	808579.1
4	Europe	Meat	Online	2017-06-22	538911855	4848	421.89	364.69	2045322.72	1768017.12	277305.6
5	Europe	Meat	Online	2012-02-28	459845054	7225	421.89	364.69	3048155.25	2634885.25	413270
6	Europe	Cereal	Online	2010-08-12	626391351	1975	205.7	117.11	406257.5	231292.25	174965.25
7	Asia	Meat	Online	2010-08-20	472974574	2542	421.89	364.69	1072444.38	927041.98	145402.4
8	Sub-Sahar	Household	Online	2011-02-03	854331052	4398	668.27	502.54	2939051.46	2210170.92	728880.54
9	Europe	Household	Online	2015-09-11	895509612	49	668.27	502.54	32745.23	24624.46	8120.77
10	Sub-Sahar	Cosmetics	Offline	2014-01-31	241871583	4031	437.2	263.33	1762353.2	1061483.23	700869.97
11	Sub-Sahar	Cosmetics	Online	2015-11-21	409090793	7911	437.2	263.33	3458689.2	2083203.63	1375485.57
12	Sub-Sahar	Fruits	Offline	2016-08-29	733153569	5288	9.33	6.92	49337.04	36592.96	12744.08
13	Middle Ea	Cosmetics	Offline	2016-10-21	620358741	6792	437.2	263.33	2969462.4	1788537.36	1180925.04
14	Asia	Vegetable	Online	2010-03-21	897317636	5084	154.06	90.93	783241.04	462288.12	320952.92

Sales Growth Rate = ((Current Period Sales - Prior Period Sales) / Prior Period Sales) * 100%

Sales Growth Rare=((2153286.8-1344707.7)/1344707.7)*100% = 60.13%

1	Region	Item Type	Sales Char	Order Date	Order ID	Units Sold	Unit Price	Unit Cost	Total Revenue	Total Cost	Total Profit
2	Sub-Sahar	Household	Offline	2015-08-31	897751939	3604	668.27	502.54	2408445.08	1811154.16	597290.92
3	Europe	Baby Food	Online	2010-11-20	599480426	8435	255.28	159.42	2153286.8	1344707.7	808579.1