## Use Pivot Tables to transform the Source Data from last year:

| 1 | A | B | C | D | E | F | G | H | 1 | J | K |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | Sales Order \# | Salesperson \# | Salesperson | Title | Region \# | Region | State | Product | \# of units | Sales | Profit Margin |
| 2 | 35005 | 1305 | John Tyler | Sales Associate I | 4 | West | NM | Stuffed Elephant | 120 | 2,520.00 | 1,470.00 |
| 3 | 35006 | 1304 | James Monroe | Sales Associate I | 2 | Northeast | NJ | Stuffed Frog | 72 | 1,584.00 | 972.00 |
| 4 | 35009 | 1305 | John Tyler | Sales Associate I | 2 | Northeast | NH | Stuffed Elephant | 132 | 2,772.00 | 1,617.00 |
| 5 | 35011 | 1306 | George Washington | Senior Sales Associate | 3 | South | LA | Stuffed Frog | 108 | 2,376.00 | 1,458.00 |
| 6 | 35014 | 1303 | James Polk | Senior Sales Associate | 1 | Midwest | SD | Stuffed Elephant | 72 | 1,512.00 | 882.00 |
| 7 | 35017 | 1304 | James Monroe | Sales Associate I | 1 | Midwest | MO | Stuffed Elephant | 36 | 756.00 | 441.00 |
| 8 | 35025 | 1305 | John Tyler | Sales Associate I | 4 | West | HI | Stuffed Unicorn | 72 | 1,440.00 | 828.00 |
| 9 | 35026 | 1303 | James Polk | Senior Sales Associate | 2 | Northeast | MA | Stuffed Bear | 120 | 3,000.00 | 1,770.00 |
| 10 | 35027 | 1303 | James Polk | Senior Sales Associate | 2 | Northeast | ME | Stuffed Frog | 84 | 1,848.00 | 1,134.00 |
| 11 | 35032 | 1305 | John Tyler | Sales Associate I | 1 | Midwest | MN | Stuffed Elephant | 120 | 2,520.00 | 1,470.00 |
| 12 | 35041 | 1306 | George Washington | Senior Sales Associate | 4 | West | UT | Stuffed Frog | 120 | 2,640.00 | 1,620.00 |
| 13 | 35046 | 1305 | John Tyler | Sales Associate I | 3 | South | AL | Stuffed Unicorn | 120 | 2,400.00 | 1,380.00 |
| 14 | 35057 | 1306 | George Washington | Senior Sales Associate | 1 | Midwest | MO | Stuffed Rear | 72 | 1.800 .00 | 1.062 .00 |

## Into meaningful information by using a Pivot Table:

| 4 | A | B | C | D | E | F | G | H | 1 | J | K | L | M |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 |  | Column Labels |  |  |  |  |  |  |  |  |  |  |  |
| 2 |  | George Washington |  |  |  |  |  | James Madison |  |  |  |  |  |
| 3 | Row Labels | Total Sales | Count | Average | \% of Salesperson | \% of Product | Rank | Total Sales | Count | Average | \% of Salesperson | \% of Product | Rank |
| 4 | Stuffed Bear | \$263,700 | 148 | \$1,782 | 20.30\% | 15.76\% | 2 | \$165,300 | 97 | \$1,704 | 19.35\% | 9.88\% | 3 |
| 5 | Stuffed Elephant | \$398,664 | 240 | \$1,661 | 30.69\% | 15.19\% | 1 | \$258,552 | 158 | \$1,636 | 30.26\% | 9.85\% | 1 |
| 6 | Stuffed Frog | \$255,816 | 141 | \$1,814 | 19.69\% | 14.67\% | 3 | \$177,936 | 101 | \$1,762 | 20.83\% | 10.21\% | 2 |
| 7 | Stuffed Koala | \$130,752 | 81 | \$1,614 | 10.06\% | 16.39\% | 4 | \$79,776 | 52 | \$1,534 | 9.34\% | 10.00\% | 6 |
| 8 | Stuffed Panda | \$128,340 | 76 | \$1,689 | 9.88\% | 13.85\% | 5 | \$90,528 | 51 | \$1,775 | 10.60\% | 9.77\% | 4 |
| 9 | Stuffed Unicorn | \$121,920 | 71 | \$1,717 | 9.38\% | 14.47\% | 6 | \$82,320 | 46 | \$1,790 | 9.63\% | 9.77\% | 5 |
| 10 | Grand Total | \$1,299,192 | 757 | \$1,716 | 100.00\% | 15.09\% |  | \$854,412 | 505 | \$1,692 | 100.00\% | 9.92\% |  |

A. Select any cell with data on the Source Data Sheet, for example cell C7.

| 4 | A | B | C | D | E | F | G | H | 1 | J | K |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | Sales Order \# | Salesperson\# | Salesperson | Titie | Region \# | Region | State | Product | \# of units | Sales | Profit Margir |
| 2 | 35005 | 1305 | John Tyler | Sales Associate I | 4 | West | NM | Stuffed Elephant | 120 | 2,520.00 | 1,470.00 |
| 3 | 35006 | 1304 | James Monroe | Sales Associate I | 2 | Northeast | NJ | Stuffed Frog | 72 | 1,584.00 | 972.00 |
| 4 | 35009 | 1305 | John Tyler | Sales Associate I | 2 | Northeast | NH | Stuffed Elephant | 132 | 2,772.00 | 1,617.00 |
| 5 | 35011 | 1306 | George Washington | Senior Sales Associate | 3 | South | LA | Stuffed Frog | 108 | 2,376.00 | 1,458.00 |
| 6 | 35014 | 1303 | mweswoin | Senior Sales Associate | 1 | Midwest | SD | Stuffed Elephant | 72 | 1,512.00 | 882.00 |
| 7 | 35017 | 1304 | James Monroe | Sales Associate I | 1 | Midwest | MO | Stuffed Elephant | 36 | 756.00 | 441.00 |
| 8 | 35025 | 1305 |  | Sales Associate I | 4 | West | Hi | Stuffed Unicorn | 72 | 1,440.00 | 828.00 |
| 9 | 35026 | 1303 | James Polk | Senior Sales Associate | 2 | Northeast | MA | Stuffed Bear | 120 | 3,000.00 | 1,770.00 |
| 10 | 35027 | 1303 | James Polk | Senior Sales Associate | 2 | Northeast | ME | Stuffed Frog | 84 | 1,848.00 | 1,134.00 |
|  | - | - | . . - | -. |  | ... | . | .. ." ... | - ${ }^{\circ}$ | n | . |

B. On the Insert tab select Pivot Table

C. The Table/Range is defined based on the number of rows and columns in the data Place the Pivot Table on an Existing Worksheet: 'Pivot 1 Product by Salesperson'!\$A\$1

D. Add Sales to the Values section, by selecting the field and dragging it to the Values section.

E. Add Salesperson to the Columns section by selecting the field and dragging it to the Columns section.

F. Add Products to the Rows section by selecting the field and dragging it to the Rows section.

G. Change the format of the numbers
(1) Right click on cell A1, which contains the heading Sum of Sales.

(3) Currency
(4) Decimal places 0
(5) OK

H. Change the "Sum of Sales" to "Total Sales"
(1) Left click on cell A1, which contains the heading Sum of Sales

(2) Type in the new heading, "Total Sales"

I. How many orders of Stuffed Bears did George Washington's clients place?
(1) For the second time, add Sales to the Values section, by selecting the field and dragging it to the Values section.

(2) Right click on cell C3, which contains the heading Sum of Sales

| - | A |  | B |  | C |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | Row Labels | Column Labels George Washington Total Sales |  |  |  |
| 2 |  |  |  |  |  |
| 3 |  |  |  |  |  |
| 4 | Stuffed Bea |  | \$263 |  |  |
| 5 | Stuffed Elep |  | \$398 |  |  |

(3) Select Value Field Settings

踊 CopyEormat Cells..
Number Format...
Refresh
Sort ,
$x$
Remove "Sum of Total"
Summarize Values By
Show Values As
[1] Value Field Settings...
PivotTable Options...
目
Hide Field List
(4) Select Count

(5) Select OK
(6) Change C3 from Count of Total to Count


|  |  | A |  |
| :--- | :---: | :---: | :---: |

J. George Washington's clients placed 757 orders, of which 141 were for Stuffed Bear product. What was the average sales in dollars for George Washington's clients that purchased the Stuffed Frog product?
(1) Again, add Sales to the Values section, by selecting the field and dragging it to the Values section.

(2) Right click on cell D3, which contains the heading Sum of Sales

(4) Select Average

Count

(5) Change D3 from Sum of Total to Average

Product
More Options...

(6) Change the format to Currency
K. George Washington sold his clients $\$ 263,700$ of the Stuffed Elephant product. The sales of Stuffed Elephants represent what percent of his total sales?
(1) Again, add Sales to the Values section, by selecting the field and dragging it to the Values section.

(2) Right click on cell E3, which contains the heading Sum of Sales


Eormat Cells...
Number Format...
[e. Refresh
Sort
X Remove "Sum of Total"
(3) Select Show Values As
(4) Select \% of Column Total

(5) Change E3 from Sum of Total to \% of Salesperson

L. The sales of Stuffed Elephants represent 30.69\% of George Washington's total sales. The sales of Stuffed Bear by George Washington represent what percent of the total sales of the Stuffed Bear product.
(1) Again, add Sales to the Values section, by selecting the field and dragging it to the Values section.

(2) Right click on cell F3, which contains the heading Sum of Sales.

(5) Change F3 from Sum of Total to \% of Product

| 4 | A | B | C | D | E | F | AF |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 |  | Column Labels $\quad$ - |  |  |  |  |  |
| 2 |  | George Washington |  |  |  |  | Total Total Sales |
| 3 | Row Labels $\quad$ | Total Sales | Count | Average | \% of Salesperso | \% of Product |  |
| 4 | Stuffed Bear | \$263,700 | 148 | \$1,782 | 20.30\% | 15.16\% | \$1,673,400 |
| 5 | Stuffed Elephant | \$398,664 | 240 | \$1,661 | 30.69\% | 15.19\% ${ }^{\prime \prime}$ | \$2,625,336 |
| 6 | Stuffed Frog | \$255,816 | 141 | \$1,814 | 19.69\% | 14.67\% | \$1,743,456 |
| 7 | Stuffed Koala | \$130,752 | 81 | \$1,614 | 10.06\% | 16.39\% | \$797,760 |
| 8 | Stuffed Panda | \$128,340 | 76 | \$1,689 | 9.88\% | 13.85\% | \$926,808 |
| 9 | Stuffed Unicorn | \$121,920 | 71 | \$1,717 | 9.38\% | 14.47\% | \$842,640 |
| 10 | Grand Total | \$1,299,192 | 757 | \$1,716 | 100.00\% | 15.09\% | \$8,609,400 |

$$
\frac{263,700}{1,673,400} \quad=\quad 15.76 \%
$$

M．The sales of Stuffed Bear by George Washington represent $15.76 \%$ of the total sales of the Stuffed Bear product．
What were the sales in dollars of the product with the second highest sales for salesperson George Washington？
（1）Again，add Sales to the Values section，by selecting the field and dragging it to the Values section．

|  |  |  |  |  | Percentage \＄～\％， $\uparrow$ <br> Number $\qquad$ | 四 Conditiol <br> 罧 Format a <br> Cell Style | PivotTable Fiel．．v $\times$ <br> Choose fields to add to report： <br> Search |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| E5 | $\checkmark$ ！ | $\times \vee f_{x}$ | 30．6855337779173\％ |  |  |  |  |  |  |
|  | A | B | C | D | E | F | $\begin{aligned} & \square \text { Salesperson } \\ & \square \text { Title } \end{aligned}$ |  |  |
| 1 | Row Labels | Column Labels George Washington －Total Sales | Count Average \％ |  | \％of Salesperson | \％of Product |  |  |  |
| 2 |  |  |  |  | $\square$ TitleRegion \＃Region |  |  |
| 3 |  |  |  |  |  |  |  |  |  |  |  |
| 4 | Stuffed Bear | \＄263，700 | 148 | \＄1，782 | 20．30\％ |  | 15．76\％ | $\square$ State |  |  |
| 5 | Stuffed Elephant | \＄398，664 | 240 | \＄1，661 | 30．69\％， | 15．19\％ | $\square$ Product |  |  |
| 6 | Stuffed Frog | \＄255，816 | 141 | \＄1，814 | 19．69\％ | 14．67\％ | $\square$ \＃of units |  |  |
| 7 | Stuffed Koala | \＄130，752 | 81 | \＄1，614 | 10．06\％ | 16．39\％ | $\square$ Sales |  |  |
| 8 | Stuffed Panda | \＄128，340 | 76 | \＄1，689 | 9．88\％ | 13．85\％ | $\square$ Profit Margin |  |  |
| 9 | Stuffed Unicorn | \＄121，920 | 71 | \＄1，717 | 9．38\％ | 14．47\％ | More Tables．．． |  | $\checkmark$ |
| 10 | Grand Total | \＄1，299，192 | 757 | \＄1，716 | 100．00\％ | 15．09\％ |  |  |  |
| 11 |  |  |  |  |  |  | Drag fields betwee | n areas below |  |
| 12 |  |  |  |  |  |  | Drag fields betwe | areas below |  |
| 13 |  |  |  |  |  |  | Y Filters | IIII Columns |  |
| 14 |  |  |  |  |  |  |  | Salesperson | on |
| 15 |  |  |  |  |  |  |  |  |  |
| 16 |  |  |  |  |  |  |  | $\Sigma$ Values |  |
| 17 |  |  |  |  |  |  |  |  |  |
| 18 |  |  |  |  |  |  |  |  |  |
| 19 |  |  |  |  |  |  |  |  |  |
| 20 |  |  |  |  |  |  |  |  |  |
| 21 |  |  |  |  |  |  | \＃Rows | $\Sigma$ Values |  |
| 22 |  |  |  |  |  |  | Product | Count | $\checkmark$ |
| 23 |  |  |  |  |  |  |  | Average |  |
| 24 |  |  |  |  |  |  |  | \％of Sal．．． |  |
| 25 |  |  |  |  |  |  |  | \％of Sal．．． |  |
| 26 |  |  |  |  |  |  |  | \％of Pro．．． |  |
| 27 |  |  |  |  |  |  |  | Sum of S．．． | $\cdots$ |
| 28 |  |  |  |  |  |  |  |  |  |
| 29 |  |  |  |  |  |  |  |  |  |

（2）Right click on cell G3，which contains the heading Sum of Sales．


(6) Change G3 from Sum of Total to Rank

| 4 | A | B | C | D | E | F | G |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | Row Labels | Column Labels George Washington - Total Sales | Count | Average | \% of Salesperson |  |  |
| 2 |  |  |  |  |  |  |  |
| 3 |  |  |  |  |  | \% of Produc |  |
| 4 | Stuffed Bear | \$263,700 | 148 | \$1,782 | 20.30\% | 15.76\% | 2 |
| 5 | Stuffed Elephant | \$398,664 | 240 | \$1,661 | 30.69\% | 15.19\% | 1 |
| 6 | Stuffed Frog | \$255,816 | 141 | \$1,814 | 19.69\% | 14.67\% | 3 |
| 7 | Stuffed Koala | \$130,752 | 81 | \$1,614 | 10.06\% | 16.39\% | 4 |
| 8 | Stuffed Panda | \$128,340 | 76 | \$1,689 | 9.88\% | 13.85\% | 5 |
| 9 | Stuffed Unicorn | \$121,920 | 71 | \$1,717 | 9.38\% | 14.47\% | 6 |
| 10 | Grand Total | \$1,299,192 | 757 | \$1,716 | 100.00\% | 15.09\% |  |

The Stuffed Bear product, with sales of $\$ 263,700$, had the second highest sales for salesperson George Washington.
Y. Draw a thick outside border around B2:G14, copy the format to AQ.



| 4 | A | Z | AA | $A B$ | AC | AD | AE | AF | AG | AH | AI | AJ | AK |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2 |  | John Tyler |  |  |  |  |  | Ulysses Grant |  |  |  |  |  |
| 3 | Row Labels $\quad$ | Total Sales | Count | Average | \% of Salesperson | \% of Product | Rank | Total Sales | Count | Average | \% of Salesperson | \% of Product | Rank |
| 4 | Stuffed Bear | \$326,100 | 198 | \$1,647 | 18.62\% | 19.49\% | 3 | \$174,000 | 102 | \$1,706 | 21.27\% | 10.40\% | 2 |
| 5 | Stuffed Elephant | \$567,000 | 332 | \$1,708 | 32.37\% | 21.60\% | 1 | \$214,704 | 131 | \$1,639 | 26.25\% | 8.18\% | 1 |
| 6 | Stuffed Frog | \$333,168 | 195 | \$1,709 | 19.02\% | 19.11\% | 2 | \$170,544 | 95 | \$1,795 | 20.85\% | 9.78\% | 3 |
| 7 | Stuffed Koala | \$147,744 | 84 | \$1,759 | 8.44\% | 18.52\% | 6 | \$69,120 | 41 | \$1,686 | 8.45\% | 8.66\% | 6 |
| 8 | Stuffed Panda | \$197,340 | 113 | \$1,746 | 11.27\% | 21.29\% | 4 | \$101,844 | 58 | \$1,756 | 12.45\% | 10.99\% | 4 |
| 9 | Stuffed Unicorn | \$180,000 | 95 | \$1,895 | 10.28\% | 21.36\% | 5 | \$87,840 | 51 | \$1,722 | 10.74\% | 10.42\% | 5 |
| 10 | Grand Total | \$1,751,352 | 1017 | \$1,722 | 100.00\% | 20.34\% |  | \$818,052 | 478 | \$1,711 | 100.00\% | 9.50\% |  |



