



**ADVANCED SPREADSHEET APPLICATIONS**

(235)

**REGIONAL 2024**

**PRODUCTION**

Job 1: Format Spreadsheet/Create Formulas \_\_\_\_\_\_\_\_\_\_ (100 points)

Job 2: Create and Format Chart \_\_\_\_\_\_\_\_\_\_ (75 points)

                        Job 3: Add Functions and Subtotal Data \_\_\_\_\_\_\_\_\_\_ (150 points)

***TOTAL POINTS \_\_\_\_\_\_\_\_\_\_ (325 points)***

**Test Time: 90 minutes**

**GENERAL GUIDELINES:**

***Failure to adhere to any of the following rules will result in disqualification:***

1. Member must hand in this test booklet and all printouts if any.
2. No equipment, supplies, or materials other than those specified for this event are allowed in the testing area. No previous BPA tests and/or sample tests (handwritten, photocopied, or keyed) are allowed in the testing area.
3. Electronic devices will be monitored according to ACT standards.

**EXAM GUIDELINES:**

1. Ensure this test booklet contains Jobs 1-3.
2. Key all jobs according to the instructions given.
3. Correct any and all formatting, spelling or grammar errors. Use the formatting guide in the *Style & Reference Manual***.**
4. Your name or initials should *not* appear on any work you submit. Use your Member ID in any occasion you would normally key your reference initials.
5. In the lower **right** hand corner of ALL work submitted (unless otherwise specified), key your Member ID and job number.
6. If you complete the event before the end of the time allotted, notify the proctor. Time may be considered a factor in determining a winner when there is a tie score.
7. Place your scoring sheet on top of your jobs. Jobs should be placed in numerical order.

|  |  |  |
| --- | --- | --- |
| **Job 1 (Format Spreadsheet/Create Formulas)** | **Points Possible** | **Points Earned** |
| Member Number and Job Number in right section of footer | 5 |  |
| Format Cells A4-F19 Light Yellow, Table Style Light 19. | 5 |  |
| Format Cell A1 with Heading 1 cell style, A2 with Heading 2. Merge and center. | 10 |  |
| Format table data in Accounting format, 0 decimals, no dollar sign, autofit column width. | 10 |  |
| Formal in Cell F5 to sum quarterly data; formula copied to F6-F9. | 5 |  |
| Conditional Formatting in data, highlighting cells in red that rank in the Top 20% of sales. | 15 |  |
| Column heading Annual Bonus in G5 and column width auto-fit | 5 |  |
| IF Formula calculating 2% bonus on sales over $2,000,000 | 20 |  |
| Print data in landscape orientation | 5 |  |
| Fit to one page for printing | 5 |  |
| Print again showing formulas, hiding Columns B-E. | 10 |  |
| Formula printout shows IF Formula in entirety | 5 |  |
| **Subtotal** | **100** |  |

|  |  |  |
| --- | --- | --- |
| **Job 2 (Create and Format Chart)** | **Points Possible** | **Points Earned** |
| Create a Stacked Column chart using agent’s sales by quarter. | 15 |  |
| Resize chart to fit cells A1-A25. | 5 |  |
| Change chart title to AGENT SALES BY QUARTER | 5 |  |
| Rename legend labels to Qtr 1, Qtr 2, Qtr 3, Qtr 4 | 10 |  |
| Change chart style to Style 3 | 5 |  |
| Change color of chart columns to Monochromatic Palette 4. | 10 |  |
| Add axis titles to chart, Y being Sales and X being Agents | 10 |  |
| Add Member ID# and Job 2 in right footer | 5 |  |
| Print chart in landscape, centered vertically and horizontally on page | 10 |  |
| **Subtotal** | **75** |  |

|  |  |  |
| --- | --- | --- |
| **Job 3 (Add Functions and Subtotal Data)** | **Points Possible** | **Points Earned** |
| Member number and job number in right section of footer | 5 |  |
| Create Agent/Commission Rate sheet, entering all data accurately in Sheet 2 | 20 |  |
| Add light gray, background 2, darker 10% fill to cells A4-F4 in Sheet 1 | 5 |  |
| Insert VLOOKUP function in Cells G5-G35 in Sheet 1 to find commission percentage for each agent from Sheet 2. | 20 |  |
| Use absolute cell reference in VLOOKUP function. | 10 |  |
| Add column headings to cells G4 and H4 and format to match other headings. | 10 |  |
| Merge and center title and subtitle over columns A-H | 5 |  |
| Formula in Cell H5 to calculate commission on purchase price and copy to cells beneath | 10 |  |
| Sort data in table by Sales Agent, then by Client Last Name, both in ascending order | 10 |  |
| Create subtotal of each Sales Agent’s total commissions, including Grand Total below the data. | 20 |  |
| Bold subtotals and Grand total and change to Accounting format, 0 decimals | 10 |  |
| Auto-fit column A. | 5 |  |
| Print worksheet with data in landscape orientation. | 5 |  |
| Hide Columns B-E and print formulas in landscape, fit to one page. | 10 |  |
| Formula printout shows all functions/formulas in full (no truncation) | 5 |  |
| **Subtotal** | **150** |  |
| **TOTAL POINTS** | **325** |  |

**JOB 1 – Printout 1A: Format Spreadsheet/Create Formulas**

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**JOB 1 – Printout 1B: Format Spreadsheet/Create Formulas**

|  |  |  |
| --- | --- | --- |
| **Sales By Agent** | | |
| **Year Ending December 31** | | |
|  |  |  |
| **Agent** | **Annual Sales** | **Annual Bonus** |
| Alvarez | =SUM(B5:E5) | =IF([@[Annual Sales]]>2000000,([@[Annual Sales]]-2000000)\*0.02,0) |
| Boone | =SUM(B6:E6) | =IF([@[Annual Sales]]>2000000,([@[Annual Sales]]-2000000)\*0.02,0) |
| Crenshaw | =SUM(B7:E7) | =IF([@[Annual Sales]]>2000000,([@[Annual Sales]]-2000000)\*0.02,0) |
| Ford | =SUM(B8:E8) | =IF([@[Annual Sales]]>2000000,([@[Annual Sales]]-2000000)\*0.02,0) |
| Grady | =SUM(B9:E9) | =IF([@[Annual Sales]]>2000000,([@[Annual Sales]]-2000000)\*0.02,0) |
| Locklear | =SUM(B10:E10) | =IF([@[Annual Sales]]>2000000,([@[Annual Sales]]-2000000)\*0.02,0) |
| Miller | =SUM(B11:E11) | =IF([@[Annual Sales]]>2000000,([@[Annual Sales]]-2000000)\*0.02,0) |
| Nguyen | =SUM(B12:E12) | =IF([@[Annual Sales]]>2000000,([@[Annual Sales]]-2000000)\*0.02,0) |
| Ogea | =SUM(B13:E13) | =IF([@[Annual Sales]]>2000000,([@[Annual Sales]]-2000000)\*0.02,0) |
| Patel | =SUM(B14:E14) | =IF([@[Annual Sales]]>2000000,([@[Annual Sales]]-2000000)\*0.02,0) |
| Robinson | =SUM(B15:E15) | =IF([@[Annual Sales]]>2000000,([@[Annual Sales]]-2000000)\*0.02,0) |
| Smith | =SUM(B16:E16) | =IF([@[Annual Sales]]>2000000,([@[Annual Sales]]-2000000)\*0.02,0) |
| Vermeer | =SUM(B17:E17) | =IF([@[Annual Sales]]>2000000,([@[Annual Sales]]-2000000)\*0.02,0) |
| Williams | =SUM(B18:E18) | =IF([@[Annual Sales]]>2000000,([@[Annual Sales]]-2000000)\*0.02,0) |
| Wu | =SUM(B19:E19) | =IF([@[Annual Sales]]>2000000,([@[Annual Sales]]-2000000)\*0.02,0) |

**JOB 2 – Printout 2: Create and Format Chart**

**JOB 3 – Printout 3A: Add Functions and Subtotal Data**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Home Sales** | | | | | | | |  |
| **4th Quarter** | | | | | | | | B5,Sheet2!$B$5:$C$104,2,0 |
|  |  |  |  |  |  |  |  |  |
| **Date** | **Client Last Name** | **Client First Name** | **Purchase Price** | **Property Location** | **Sales Agent** | **Commission %** | **Commission on Sale** |  |
| 12/21/2023 | Garcia | Carlos | 159500 | Garretson | Alvarez | 5% | 7975 |  |
| 11/7/2023 | Khatri | Amar | 379900 | Belle Fourche | Alvarez | 5% | 18995 |  |
| 12/1/2023 | Lopez | Maria | 280000 | Mitchell | Alvarez | 5% | 14000 |  |
| 10/21/2023 | Patel | Inaya | 299900 | Box Elder | Alvarez | 5% | 14995 |  |
| 11/4/2023 | Wolf | Sebastian | 190000 | Harrisburg | Alvarez | 5% | 9500 |  |
|  |  |  |  |  | **Alvarez Total** |  | **$ 65,465** |  |
| 10/20/2023 | Markell | Amber | 350000 | Spearfish | Boone | 3% | 10500 |  |
| 12/13/2023 | Nader | Rasheed | 235000 | Springfield | Boone | 3% | 7050 |  |
| 11/15/2023 | Palmer | Corbin | 265000 | Lead | Boone | 3% | 7950 |  |
| 10/3/2023 | Smith | Kischa | 245000 | Sioux Falls | Boone | 3% | 7350 |  |
| 12/31/2023 | Thompsen | Malik | 635000 | Rapid City | Boone | 3% | 19050 |  |
|  |  |  |  |  | **Boone Total** |  | **$ 51,900** |  |
| 10/13/2023 | Johnson | Wayne | 215000 | Yankton | Crenshaw | 5% | 10750 |  |
| 11/18/2023 | Walters | Jacob | 289900 | Summerset | Crenshaw | 5% | 14495 |  |
|  |  |  |  |  | **Crenshaw Total** |  | **$ 25,245** |  |
| 11/10/2023 | Davis | James | 230000 | Milbank | Ford | 4% | 9200 |  |
| 12/10/2023 | Khan | Hiram | 387000 | Chamberlain | Ford | 4% | 15480 |  |
| 12/18/2023 | Rogers | Sarah | 229900 | Sioux Falls | Ford | 4% | 9196 |  |
|  |  |  |  |  | **Ford Total** |  | **$ 33,876** |  |
| 12/27/2023 | Grady | Elijah | 330000 | Sioux Falls | Grady | 4% | 13200 |  |
| 10/28/2023 | Zhang | Kai | 105000 | Vermillion | Grady | 4% | 4200 |  |
|  |  |  |  |  | **Grady Total** |  | **$ 17,400** |  |
| 10/30/2023 | Jones | Bryan | 265000 | Rapid Valley | Locklear | 5% | 13250 |  |
| 11/13/2023 | Rodriguez | Miguel | 63900 | Pine Ridge | Locklear | 5% | 3195 |  |
|  |  |  |  |  | **Locklear Total** |  | **$ 16,445** |  |
| 10/5/2023 | Brady | Monty | 385000 | Rapid City | Nguyen | 4% | 15400 |  |
| 12/15/2023 | Morgan | Trent | 635000 | Gettysburg | Nguyen | 4% | 25400 |  |
| 12/22/2023 | Williams | Nevaeh | 439000 | Porcupine | Nguyen | 4% | 17560 |  |
|  |  |  |  |  | **Nguyen Total** |  | **$ 58,360** |  |
| 10/15/2023 | Wells | Nancy | 287500 | Mitchell | Ogea | 3% | 8625 |  |
|  |  |  |  |  | **Ogea Total** |  | **$ 8,625** |  |
| 11/24/2023 | Aziz | Robert | 420000 | Aberdeen | Patel | 3% | 12600 |  |
|  |  |  |  |  | **Patel Total** |  | **$ 12,600** |  |
| 11/1/2023 | Catawnee | Lakota | 364900 | Sturgis | Robinson | 3% | 10947 |  |
| 10/19/2023 | Chote | Jonathan | 550000 | Sioux Falls | Robinson | 3% | 16500 |  |
|  |  |  |  |  | **Robinson Total** |  | **$ 27,447** |  |
| 12/7/2023 | Baker | Jacqueline | 275000 | Rapid City | Smith | 5% | 13750 |  |
|  |  |  |  |  | **Smith Total** |  | **$ 13,750** |  |
| 12/16/2023 | Nguyen | Emilee | 104900 | Wagner | Vermeer | 5% | 5245 |  |
|  |  |  |  |  | **Vermeer Total** |  | **$ 5,245** |  |
| 10/10/2023 | Morton | Tiffany | 299000 | Aberdeen | Williams | 4% | 11960 |  |
|  |  |  |  |  | **Williams Total** |  | 11960 |  |
| 11/8/2023 | Hillis | Alyssa | 149900 | Dakota Dunes | Wu | 5% | 7495 |  |
| 11/20/2023 | Wu | Feng | 1475000 | Lennox | Wu | 5% | 73750 |  |
|  |  |  |  |  | **Wu Total** |  | **$ 81,245** |  |
|  |  |  |  |  | **Grand Total** |  | **$ 429,563** |  |

**JOB 3 – Printout 3B: Add Functions and Subtotal Data**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Home Sales** | | | |  |
| **4th Quarter** | | | | B5,Sheet2!$B$5:$C$104,2,0 |
|  |  |  |  |  |
| **Date** | **Sales Agent** | **Commission %** | **Commission on Sale** |  |
| 45281 | Alvarez | =VLOOKUP(F5,Sheet2!$A$2:$B$16,2,0) | =D5\*G5 |  |
| 45237 | Alvarez | =VLOOKUP(F6,Sheet2!$A$2:$B$16,2,0) | =D6\*G6 |  |
| 45261 | Alvarez | =VLOOKUP(F7,Sheet2!$A$2:$B$16,2,0) | =D7\*G7 |  |
| 45220 | Alvarez | =VLOOKUP(F8,Sheet2!$A$2:$B$16,2,0) | =D8\*G8 |  |
| 45234 | Alvarez | =VLOOKUP(F9,Sheet2!$A$2:$B$16,2,0) | =D9\*G9 |  |
|  | **Alvarez Total** |  | **=SUBTOTAL(9,H5:H9)** |  |
| 45219 | Boone | =VLOOKUP(F11,Sheet2!$A$2:$B$16,2,0) | =D11\*G11 |  |
| 45273 | Boone | =VLOOKUP(F12,Sheet2!$A$2:$B$16,2,0) | =D12\*G12 |  |
| 45245 | Boone | =VLOOKUP(F13,Sheet2!$A$2:$B$16,2,0) | =D13\*G13 |  |
| 45202 | Boone | =VLOOKUP(F14,Sheet2!$A$2:$B$16,2,0) | =D14\*G14 |  |
| 45291 | Boone | =VLOOKUP(F15,Sheet2!$A$2:$B$16,2,0) | =D15\*G15 |  |
|  | **Boone Total** |  | **=SUBTOTAL(9,H11:H15)** |  |
| 45212 | Crenshaw | =VLOOKUP(F17,Sheet2!$A$2:$B$16,2,0) | =D17\*G17 |  |
| 45248 | Crenshaw | =VLOOKUP(F18,Sheet2!$A$2:$B$16,2,0) | =D18\*G18 |  |
|  | **Crenshaw Total** |  | **=SUBTOTAL(9,H17:H18)** |  |
| 45240 | Ford | =VLOOKUP(F20,Sheet2!$A$2:$B$16,2,0) | =D20\*G20 |  |
| 45270 | Ford | =VLOOKUP(F21,Sheet2!$A$2:$B$16,2,0) | =D21\*G21 |  |
| 45278 | Ford | =VLOOKUP(F22,Sheet2!$A$2:$B$16,2,0) | =D22\*G22 |  |
|  | **Ford Total** |  | **=SUBTOTAL(9,H20:H22)** |  |
| 45287 | Grady | =VLOOKUP(F24,Sheet2!$A$2:$B$16,2,0) | =D24\*G24 |  |
| 45227 | Grady | =VLOOKUP(F25,Sheet2!$A$2:$B$16,2,0) | =D25\*G25 |  |
|  | **Grady Total** |  | **=SUBTOTAL(9,H24:H25)** |  |
| 45229 | Locklear | =VLOOKUP(F27,Sheet2!$A$2:$B$16,2,0) | =D27\*G27 |  |
| 45243 | Locklear | =VLOOKUP(F28,Sheet2!$A$2:$B$16,2,0) | =D28\*G28 |  |
|  | **Locklear Total** |  | **=SUBTOTAL(9,H27:H28)** |  |
| 45204 | Nguyen | =VLOOKUP(F30,Sheet2!$A$2:$B$16,2,0) | =D30\*G30 |  |
| 45275 | Nguyen | =VLOOKUP(F31,Sheet2!$A$2:$B$16,2,0) | =D31\*G31 |  |
| 45282 | Nguyen | =VLOOKUP(F32,Sheet2!$A$2:$B$16,2,0) | =D32\*G32 |  |
|  | **Nguyen Total** |  | **=SUBTOTAL(9,H30:H32)** |  |
| 45214 | Ogea | =VLOOKUP(F34,Sheet2!$A$2:$B$16,2,0) | =D34\*G34 |  |
|  | **Ogea Total** |  | **=SUBTOTAL(9,H34:H34)** |  |
| 45254 | Patel | =VLOOKUP(F36,Sheet2!$A$2:$B$16,2,0) | =D36\*G36 |  |
|  | **Patel Total** |  | **=SUBTOTAL(9,H36:H36)** |  |
| 45231 | Robinson | =VLOOKUP(F38,Sheet2!$A$2:$B$16,2,0) | =D38\*G38 |  |
| 45218 | Robinson | =VLOOKUP(F39,Sheet2!$A$2:$B$16,2,0) | =D39\*G39 |  |
|  | **Robinson Total** |  | **=SUBTOTAL(9,H38:H39)** |  |
| 45267 | Smith | =VLOOKUP(F41,Sheet2!$A$2:$B$16,2,0) | =D41\*G41 |  |
|  | **Smith Total** |  | **=SUBTOTAL(9,H41:H41)** |  |
| 45276 | Vermeer | =VLOOKUP(F43,Sheet2!$A$2:$B$16,2,0) | =D43\*G43 |  |
|  | **Vermeer Total** |  | **=SUBTOTAL(9,H43:H43)** |  |
| 45209 | Williams | =VLOOKUP(F45,Sheet2!$A$2:$B$16,2,0) | =D45\*G45 |  |
|  | **Williams Total** |  | =SUBTOTAL(9,H45:H45) |  |
| 45238 | Wu | =VLOOKUP(F47,Sheet2!$A$2:$B$16,2,0) | =D47\*G47 |  |
| 45250 | Wu | =VLOOKUP(F48,Sheet2!$A$2:$B$16,2,0) | =D48\*G48 |  |
|  | **Wu Total** |  | **=SUBTOTAL(9,H47:H48)** |  |
|  | **Grand Total** |  | **=SUBTOTAL(9,H5:H48)** |  |