| **Type of Formula** | **Use** | **Example of Correct Formula** | **Explanation** |
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| **Conditional Formulas** | Use AND, OR, NOT, and IF function to create conditional formulas. These formulas are used to:  Create a formula that results in a logical value (true/false)  Create a formula that results in another calculation or in values other than true/false | =IF(A2=15, "OK", "Not OK")  =IF(OR(A5<>"Sprockets", A6<>"Widgets"), "OK", "Not OK")  =IF(A5 < 29701, A5 \* 15%, A5 \* 25%) | If the value in cell A2 equals 15, then return **OK**. If it doesn’t equal 15, then return **Not OK**.  If the value in cell A5 is not equal to **Sprockets** or if the value in A6 is not equal to **Widgets**, then return **OK**. Otherwise, return **Not OK**.  If the value in cell A5 is less than 29,701, multiplies the value in cell A5 by 15%. If the value in A5 is greater than or equal to 29,701, then the amount in cell A5 is multiplied by 25%. |
| **Lookups** | Lookup values in a range and populate a corresponding value | =VLOOKUP(“Parks”,B2:E7,2, FALSE) | Looks up the value **Parks** in the first column of the defined range B2:E7 and returns the value found in the second column of the same range. The range lookup **FALSE** returns an exact match. |
| **Text** | Change the case of text | =UPPER  =LOWER  =PROPER | Changes text to all UPPERCASE.  Changes text to all lowercase.  Changes text to Title Case. |

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| **Date and Time** | Adjust a revised schedule date by adding days | =A2+3 | Add 3 days to the date value in cell A2. |
| Add a number of months to a date | =DATE(YEAR(A2),MONTH(A2)+B2,DAY(A2)) | Add 3 months to date in A2, when B2 contains the number 3. |
| Add number of years to a date | =DATE(YEAR(A2)+B2,MONTH(A2),DAY(A2)) | Add 3 years to date in A2, when B2 contains the number 3. |
| Add combination of years, months and days to a date | =DATE(YEAR(A2)+3,MONTH(A2)+1,DAY(A2)+5) | Add 3 years, 1 month, and 5 days to value in A2. |
| Add today’s date | =TODAY()  =NOW() | Populates the current date, and will refresh automatically.  Populates the current date, and will not refresh automatically. |
| Calculate the difference between two dates | =A3-A2 | If the cells are formatted as dates, you can simply subtract. |
| Count weekdays between two dates | =NETWORKDAYS(A2,A3) | Counts the weekdays between the values in the two cells. |
| Calculate the number of months between two dates | =MONTH(A3)-MONTH(A2)  =(YEAR(A4)-YEAR(A3))\*12+MONTH(A4)-MONTH(A3) | Months occurring between two dates in the same year.  Months occurring between two dates over a year apart. |
| Calculate the number of years between two dates | =YEAR(A3)-YEAR(A2) | Years occurring between two dates. |
| **Statistical** | Average a group of numbers (arithmetic mean, and is calculated by adding a group of numbers and then dividing by the count of those numbers) | =AVERAGE(A2:A7)  =AVERAGE(IF(A2:A7<>0, A2:A7,"")) | Averages all of the numbers in list.  Averages the numbers in the list except those that contain zero. |
| Median is the middle number of a group of numbers; that is, half the numbers have values that are greater than the median, and half have values less than the median | =MEDIAN(A2:A7) | Median of numbers in the list. |
| Mode is the most frequently occurring number in a group of numbers | =MODE(A2:A7) | Mode of numbers in the list. |
| Percentage Change: Calculate the difference between two numbers as a percentage | =(B2-A2)/ABS(A2) | Divides the difference between the second and first numbers by the absolute value of the first number to get the percentage change. |
| Increase or decrease a number by a percentage | =A2\*(1-25%)  =A2\*(1+35%) | Decreases A2 by 25%.  Increases A2 by 35%. |

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| **Counting** | Count cells that contain numbers that are not in a contiguous row or column | =COUNT(A2:A6)  =COUNT(A2:A3,A6) | Counts number of cells that contain numbers.  Counts number of cells that contain numbers, of the top two and bottom cells in the list A2 to A6. |
| Count nonblank cells | =COUNTA(A2:A6) | Counts the number of nonblank cells in the list. |
| Count how often a single value occurs | =COUNTIF(A2:A7,"Buchanan")  =COUNTIF(B2:B7,"< 20000") | Number of entries for **Buchanan**.  Number of values in the range B2 to B7 less than 20,000. |
| Count how often multiple number values occur | =COUNT(IF((A2:A11="South")\*(C2:C11="Meat"),D2:D11)) | Number of salespeople who sold **Meat** in the **South** region. |
| Convert measurements | =CONVERT(A2,"C","F")  =CONVERT(A2,"tsp","tbs")  =CONVERT(A2,"gal","l")  =CONVERT(A2,”km”,”mi”)  =CONVERT(A2,"in","ft")  =CONVERT(A2,"cm","in") | Degrees Celsius to Fahrenheit.  Teaspoons to tablespoons.  Gallons to liters.  Kilometers to mile.  Inches to feet.  Centimeters to inches. |