How can I set minimum and maximum values in formulas using Excel?

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Excel allows users to set minimum and maximum values in formulas to specify a range of data that can be used in calculations. This feature is particularly useful when dealing with large datasets or when specific parameters need to be met. To set a minimum or maximum value in a formula, the MIN and MAX functions can be used. These functions allow users to specify a range of cells or values and return the smallest or largest value within that range. This helps ensure that calculations are performed within the desired range and can help avoid errors or inaccuracies in the data. By utilizing these functions, users can effectively control the input and output of data in their Excel formulas.

Excel: Set Minimum and Maximum Values in Formulas

You can use the following methods to set a limit on the minimum and maximum values that can be returned by formulas in Excel:

Method 1: Set Minimum Value

=MAX(300,(SUM(B2:D2)))

This particular formula calculates the sum of values in the range B2:D2, but if the sum is less than 300 then the formula simply returns 300.

Method 2: Set Maximum Value

=MIN(300,(SUM(B2:D2)))

This particular formula calculates the sum of values in

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the range B2:D2, but if the sum is greater than 300 then the formula simply returns 300.

Method 3: Set Both Minimum and Maximum Values

=MIN(320,MAX(280,SUM(B2:D2)))

This particular formula calculates the sum of values in the range B2:D2, but if the sum is less than 280 or greater than 320, the formula simply returns these lower or upper limits.

The following examples show how to use each method in practice with the following dataset in Excel that contains information about exam scores for various students in some class:

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	A	B	C	D	E	F
1	**Student**	**Exam 1**	**Exam 2**	**Exam 3**		
2	Andy	90	101	115		
3	Bob	88	95	90		
4	Chad	90	93	91		
5	Doug	86	88	90		
6	Eric	79	80	88		
7	Frank	78	89	84		
8	Greg	90	95	85		
9	Henry	94	105	105		
10	Isaac	99	101	105		
11	John	96	100	98		
12	Kendall	80	86	90		
13	Luke	68	76	70		
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Example 1: Set Minimum Value that Can Be Returned by Formula

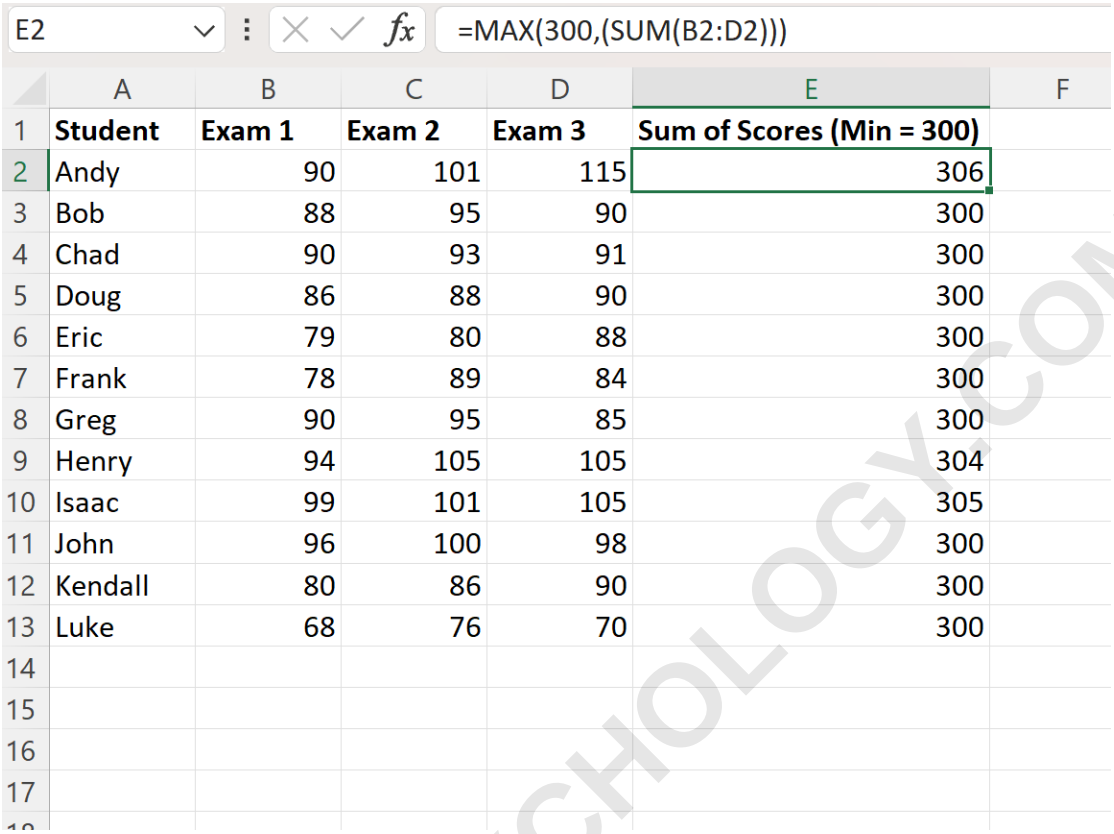
Suppose we would like to calculate the sum of exam scores for each student but we want the minimum value to be set at 300.

We can type the following formula into cell E2:

=MAX(300,(SUM(B2:D2)))

We can then click and drag this formula down to each

remaining cell in column E:



	A	B	C	D	E	F
1	**Student**	**Exam 1**	**Exam 2**	**Exam 3**	**Sum of Scores (Min = 300)**	
2	Andy	90	101	115	306	
3	Bob	88	95	90	300	
4	Chad	90	93	91	300	
5	Doug	86	88	90	300	
6	Eric	79	80	88	300	
7	Frank	78	89	84	300	
8	Greg	90	95	85	300	
9	Henry	94	105	105	304	
10	Isaac	99	101	105	305	
11	John	96	100	98	300	
12	Kendall	80	86	90	300	
13	Luke	68	76	70	300	
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The formula either returns the sum of exam scores or the value 300 if the sum is less than 300.

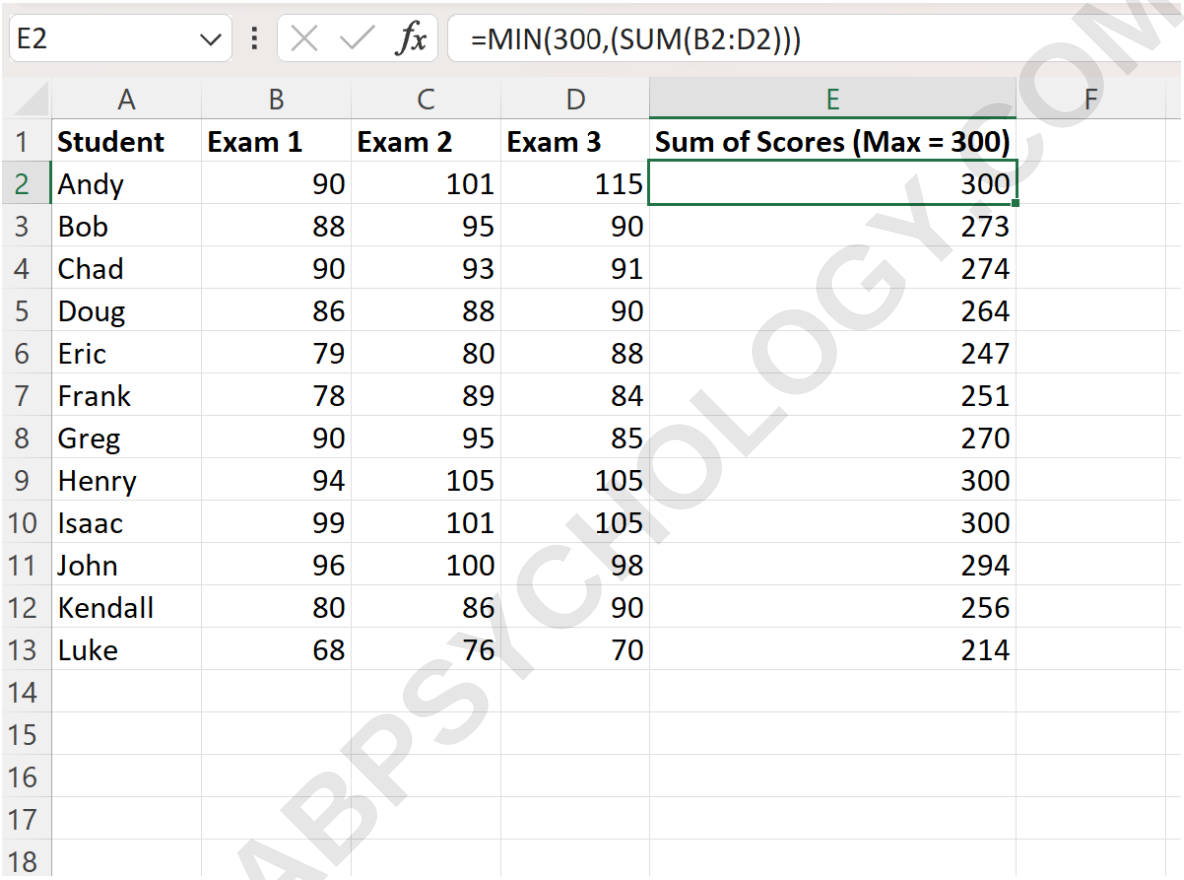
Example 2: Set Maximum Value that Can Be Returned by Formula

Suppose we would like to calculate the sum of exam scores for each student but we want the maximum value to be set at 300.

We can type the following formula into cell E2:

=MIN(300,(SUM(B2:D2)))

We can then click and drag this formula down to each remaining cell in column E:



	A	B	C	D	E	F
1	**Student**	**Exam 1**	**Exam 2**	**Exam 3**	**Sum of Scores (Max = 300)**	
2	Andy	90	101	115	300	
3	Bob	88	95	90	273	
4	Chad	90	93	91	274	
5	Doug	86	88	90	264	
6	Eric	79	80	88	247	
7	Frank	78	89	84	251	
8	Greg	90	95	85	270	
9	Henry	94	105	105	300	
10	Isaac	99	101	105	300	
11	John	96	100	98	294	
12	Kendall	80	86	90	256	
13	Luke	68	76	70	214	
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The formula either returns the sum of exam scores or the value 300 if the sum is greater than 300.

Example 3: Set Both Minimum and Maximum Values that Can Be Returned by Formula

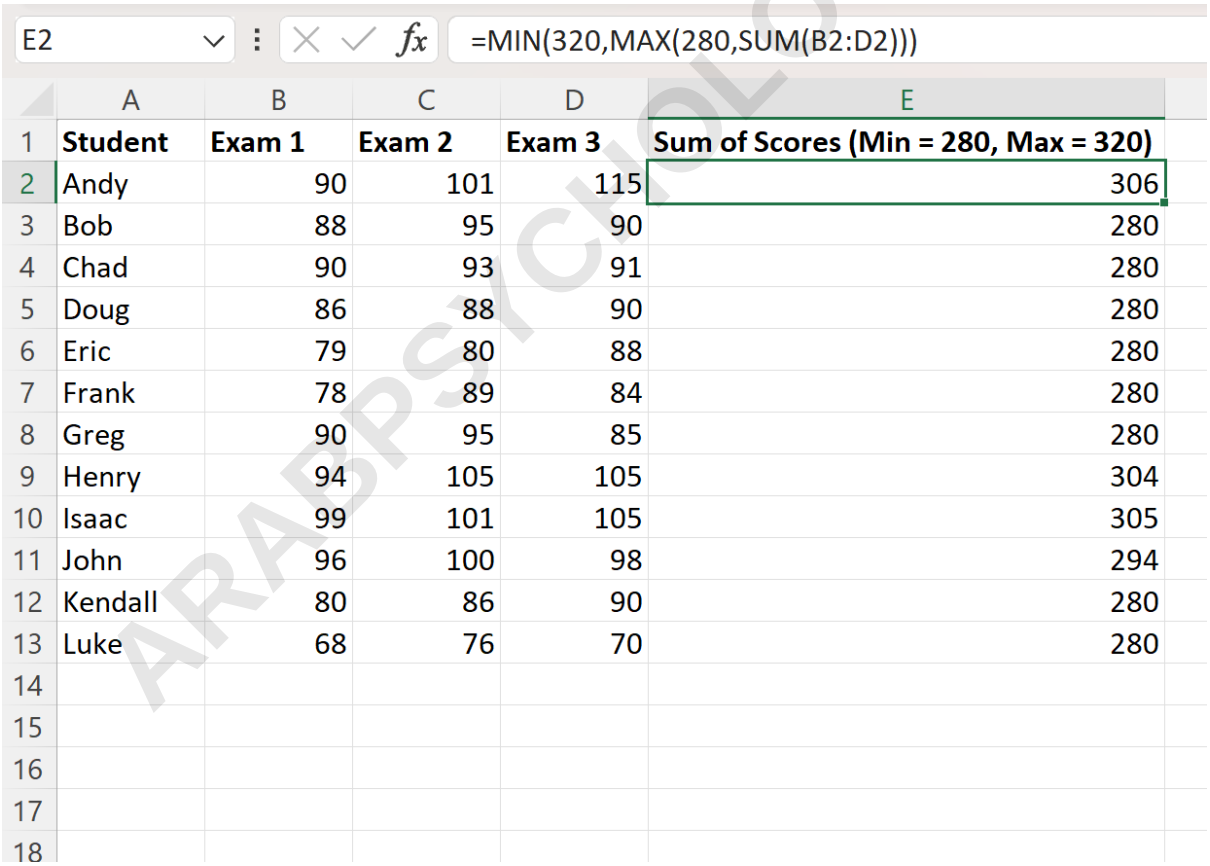
Suppose we would like to calculate the sum of exam

scores for each student but we want the minimum and maximum values to be set at 280 and 300, respectively.

We can type the following formula into cell E2:

=MIN(320,MAX(280,SUM(B2:D2)))

We can then click and drag this formula down to each remaining cell in column E:



	A	B	C	D	E
1	**Student**	**Exam 1**	**Exam 2**	**Exam 3**	**Sum of Scores (Min = 280, Max = 320)**
2	Andy	90	101	115	306
3	Bob	88	95	90	280
4	Chad	90	93	91	280
5	Doug	86	88	90	280
6	Eric	79	80	88	280
7	Frank	78	89	84	280
8	Greg	90	95	85	280
9	Henry	94	105	105	304
10	Isaac	99	101	105	305
11	John	96	100	98	294
12	Kendall	80	86	90	280
13	Luke	68	76	70	280
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The formula either returns the sum of exam scores or the value 280 or 320 if the sum is outside of these limits.

The following tutorials explain how to perform other common tasks in Excel:

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