Spreadsheet Functions

December 1, 2025

Contents

1 Rounding Functions

1.1 ROUND

	A	B	C	D	E	F
1		=ROUND(1.1234,3)				
2						

```
1.123
```

	A	B	C	D	E	F
1		=ROUND(1.1237,3)				
2						

```
1.124
```

1.2 ROUNDUP

	A	B	C	D	E	F
1		=ROUNDUP(1.1234,3)				
2						

```
1.124
```

	A	B	C	D	E	F
1		=ROUNDUP(1.1237,3)				
2						

```
1.124
```

1.3 ROUNDDOWN

	A	B	C	D	E	F
1		=ROUNDDOWN(1.1234,3)				
2						

```
1.123
```

	A	B	C	D	E	F
1		=ROUNDDOWN(1.1237,3)				
2						

```
1.123
```

1.4 INT

	A	B	C	D	E	F
1		=INT(1.1234)				
2		=INT(100.99)				

```
1
100
```

2 Mathematical Functions

2.1 SIGN

	A	B	C	D	E	F
1		=SIGN(16)				
2						

```
1
```

	A	B	C	D	E	F
1		=SIGN(-8)				
2						

```
-1
```

	A	B	C	D	E	F
1		=SIGN(0)				
2						

0

2.2 ABS

	A	B	C	D	E	F
1		=ABS(-25)				
2						

25

	A	B	C	D	E	F
1		=ABS(25)				
2						

25

2.3 POWER

	A	B	C	D	E	F
1		=POWER(2; 3)				
2						

8

	A	B	C	D	E	F
1		=POWER(10; 4)				
2						

10000

2.4 LOG

	A	B	C	D	E	F
1		=LOG(1000)				
2						

3

	A	B	C	D	E	F
1		=LOG(8; 2)				
2						

3

2.5 LN

	A	B	C	D	E	F
1		=LN(2,71828)				
2						

0.999999327347282

	A	B	C	D	E	F
1		=LN(EXP(1))				
2						

1

2.6 LOG10

	A	B	C	D	E	F
1		=LOG10(1000))				
2						

3

2.7 EXP

$$EXP(x) = e^x$$

	A	B	C	D	E	F
1		=EXP(1)				
2						

2.71828182845905

	A	B	C	D	E	F
1		=LN(EXP(2))				
2						

2

2.8 SQRT

	A	B	C	D	E	F
1		=SQRT(16)				
2						

```
4
```

2.9 PI

	A	B	C	D	E	F
1		=PI()				
2						

```
3.14159265358979
```

2.10 SIN

	A	B	C	D	E	F
1		=SIN(PI()/2)				
2						

```
1
```

2.11 COS

	A	B	C	D	E	F
1		=COS(2 * PI())				
2						

```
1
```

2.12 RADIANS

	A	B	C	D	E	F
1		=RADIANS(90)				
2						

```
1.5707963267949
```

2.13 DEGREES

	A	B	C	D	E	F
1		=DEGREES(PI()/2)				
2						

```
90
```

2.14 ISNUMBER

	A	B	C	D	E	F
1	8	=ISNUMBER(A1)				
2						

```
TRUE
```

	A	B	C	D	E	F
1	Cat	=ISNUMBER(A1)				
2						

```
FALSE
```

2.15 ISEVEN

	A	B	C	D	E	F
1	8	=ISEVEN(A1)				
2						

```
TRUE
```

	A	B	C	D	E	F
1	9	=ISEVEN(A1)				
2						

```
FALSE
```

2.16 ISODD

	A	B	C	D	E	F
1	8	=ISODD(A1)				
2						

```
FALSE
```

	A	B	C	D	E	F
1	9	=ISODD(A1)				
2						

```
TRUE
```

2.17 ISBLANK

	A	B	C	D	E	F
1		=ISBLANK(A1)				
2						

```
TRUE
```

	A	B	C	D	E	F
1	Cats	=ISBLANK(A1)				
2						

```
FALSE
```

2.18 BASE

	A	B	C	D	E	F
1		=BASE(16; 2; 8)				
2		=BASE(255, 2; 8)				
3		=BASE(3; 2; 8)				

```
00010000
11111111
00000011
```

2.19 MOD

	A	B	C	D	E	F
1		=MOD(5; 2)				
2		=MOD(10; 9)				
3		=MOD(8; 3)				

```
1
1
2
```

2.20 ROMAN

	A	B	C	D	E	F
1		=ROMAN(1453)				
2		=ROMAN(2025)				
3		=ROMAN(8)				
4		=ROMAN(105)				
5		=ROMAN(50)				

```
MCDLIII
MMXXV
VIII
CV
L
```

3 Statistical Functions

3.1 MIN

	A	B	C	D	E	F
1	5					
2	7					
3	12					
4	11					
5	=MIN(A1:A4)					

```
5
```

3.2 MAX

	A	B	C	D	E	F
1	5					
2	7					
3	12					
4	11					
5	=MAX(A1:A4)					

```
12
```

3.3 VAR

	A	B	C	D	E	F
1	5					
2	7					
3	12					
4	11					
5	=VAR(A1:A4)					

```
10.9166666666667
```

3.4 STDEV

	A	B	C	D	E	F
1	5					
2	7					
3	12					
4	11					
5	=STDEV(A1:A4)					

```
3.30403793359984
```

3.5 SUM

	A	B	C	D	E	F
1	5					
2	7					
3	12					
4	11					
5	=SUM(A1:A4)					

```
35
```

3.6 PRODUCT

	A	B	C	D	E	F
1	5					
2	7					
3	12					
4	11					
5	=PRODUCT(A1:A4)					

```
4620
```

3.7 AVERAGE

	A	B	C	D	E	F
1	5					
2	7					
3	12					
4	11					
5	=AVERAGE(A1:A4)					

```
8.75
```

3.8 COUNT

	A	B	C	D	E	F
1	5					
2	7					
3	12					
4	11					
5	=COUNT(A1:A4)					

```
4
```

3.9 MEDIAN

	A	B	C	D	E	F
1	5					
2	7					
3	12					
4	11					
5	=MEDIAN(A1:A4)					

```
9.0
```

3.10 PERCENTILE

	A	B	C	D	E	F
1	5					
2	7					
3	12					
4	11					
5	=PERCENTILE(A1:A4; 0)					

```
5
```

	A	B	C	D	E	F
1	5					
2	7					
3	12					
4	11					
5	=PERCENTILE(A1:A4; 1)					

```
12
```

	A	B	C	D	E	F
1	5					
2	7					
3	12					
4	11					
5	=PERCENTILE(A1:A4; 0.5)					

```
9
```

	A	B	C	D	E	F
1	5					
2	7					
3	12					
4	11					
5	=PERCENTILE(A1:A4; 0.25)					

```
6.5
```

	A	B	C	D	E	F
1	5					
2	7					
3	12					
4	11					
5	=PERCENTILE(A1:A4; 0.75)					

```
11.25
```

3.11 QUARTILE

	A	B	C	D	E	F
1	5					
2	7					
3	12					
4	11					
5	=QUARTILE(A1:A4; 0)					

```
5
```

	A	B	C	D	E	F
1	5					
2	7					
3	12					
4	11					
5	=QUARTILE(A1:A4; 1)					

```
6.5
```

	A	B	C	D	E	F
1	5					
2	7					
3	12					
4	11					
5	=QUARTILE(A1:A4; 2)					

```
9
```

	A	B	C	D	E	F
1	5					
2	7					
3	12					
4	11					
5	=QUARTILE(A1:A4; 3)					

```
11.25
```

	A	B	C	D	E	F
1	5					
2	7					
3	12					
4	11					
5	=QUARTILE(A1:A4; 4)					

```
12
```

3.12 SKEW

	A	B	C	D	E	F
1	5					
2	7					
3	12					
4	11					
5	=SKEW(A1:A4)					

```
-0.592518588276328
```

	A	B	C	D	E	F
1	5					
2	7					
3	12					
4	11					
5	=KURT(A1:A4)					

```
-3.86900530272129
```

3.13 CORREL

	A	B	C	D	E	F
1	5	10				
2	7	14				
3	12	24				
4	11	22				
5	=CORREL(A1:A4; B1:B4)					

```
1
```

	A	B	C	D	E	F
1	5	22				
2	7	24				
3	12	14				
4	11	10				
5	=CORREL(A1:A4; B1:B4)					

```
-0.862595419847328
```

3.14 FACT

	A	B	C	D	E	F
1	=FACT(5)					
2						

```
120
```

3.15 COMBIN

	A	B	C	D	E	F
1	=COMBIN(5; 2)					
2						

$$\text{nCr} = \frac{n!}{r!(n-r)!} = \frac{5!}{2!(5-2)!} = \frac{5 \times 4 \times 3!}{2 \times 1 \times 3!} = \frac{20}{2} = 10$$

```
10
```

3.16 SUMSQ

	A	B	C	D	E	F
1	1					
2	2					
3	3					
4	4					
5	=SUMSQ(A1:A4)					

```
30
```

4 Logical Functions

4.1 AND

	A	B	C	D	E	F
1		TRUE	FALSE			
2		TRUE	TRUE			
3		FALSE	FALSE			
4		=AND(B1:C1)				
5		=AND(B2:C2)				
6		=AND(B3:C3)				

```
FALSE
TRUE
FALSE
```

4.2 OR

	A	B	C	D	E	F
1		TRUE	FALSE			
2		TRUE	TRUE			
3		FALSE	FALSE			
4		=OR(B1:C1)				
5		=OR(B2:C2)				
6		=OR(B3:C3)				

```
TRUE
TRUE
FALSE
```

4.3 NOT

	A	B	C	D	E	F
1		TRUE				
2		TRUE				
3		FALSE				
4		=NOT(B1)				
5		=NOT(B2)				
6		=NOT(B3)				

```
FALSE
FALSE
TRUE
```

4.4 XOR

	A	B	C	D	E	F
1		TRUE	FALSE			
2		TRUE	TRUE			
3		FALSE	TRUE			
4		FALSE	FALSE			
5		=XOR(B1:C1)				
6		=XOR(B2:C2)				
7		=XOR(B3:C3)				

```
TRUE
FALSE
TRUE
FALSE
```

4.5 IF

	A	B	C	D	E	F
1	5	6	12	-1	10	
2	=IF(A1 = 5; TRUE; FALSE)					
3	=IF(AND(A1 >= 5; SIGN(D1) = -1); "YES"; "NO")					
4	=IF(AND(A1 = 5; B1 = 6; C1 > 5); "YES"; "NO")					
5	=IF(A1 < 0; "NEG"; IF(A1 = 0; "ZERO"; "POS"))					
6						
7						

```
TRUE
YES
YES
POS
```

4.5.1 IF...ELSEIF...ELSEIF...ELSE

	A	B	C	D	E	F
1	5	22				
2	7	24				

Write an IF statement to handle this situation:

- If the value in A1 is less than 10, return "LOW"
- If the value in A1 is between 10 and 20 (inclusive), return "MEDIUM"

- If the value in A1 is between 21 and 30 (inclusive), return "HIGH"
- If the value in A1 is greater than 30, return "VERY HIGH"

```
=IF(A1 < 10; "LOW";
   IF(AND(A1 >= 10; A1 <= 20); "MEDIUM";
      IF(AND(A1 >= 21; A1 <= 30); "HIGH";
         "VERY HIGH")))
```

A shorter version:

```
=IF(A1 < 10; "LOW";
   IF(A1 <= 20; "MEDIUM";
      IF(A1 <= 30; "HIGH";
         "VERY HIGH")))
```

The answer is

```
LOW
```

Use `IFS` function (if your Excel supports it):

```
=IFS(A1 < 10; "LOW";
     AND(A1 >= 10; A1 <= 20); "MEDIUM";
     AND(A1 >= 21; A1 <= 30); "HIGH";
     A1 > 30; "VERY HIGH")
```

4.5.2 How many real roots?

	A	B	C	D	E	F
1	-1	5	100			
2	=POWER(B1; 2) - 4 * A1 * C1					

Write an IF statement (indeed they are expressions in Excel) to determine how many real roots the quadratic equation $Ax^2 + Bx + C = 0$ has, based on the values in A1, B1, and C1. Return 0 (No real roots), 1 (repeated root), or 2 (two real roots).

```
=IF(B2 < 0; 0;
   IF(B2 = 0; 1; 2))
```

Use `IFS` function (if your Excel supports it):

```
=IFS(B2 < 0; 0;
     B2 = 0; 1;
     B2 > 0; 2)
```

4.5.3 How is the weather outside?

Suppose that the temperature is in cell A1 (in degrees Celsius). Write an IF statement to return the following:

- If the temperature is less than or equal to 0, return "Freezing"
- If the temperature is greater than 0 but less than or equal to 15, return "Cold"
- If the temperature is greater than 15 but less than or equal to 25, return "Warm"
- If the temperature is greater than 25 but less than or equal to 35, return "Hot"
- If the temperature is greater than 35, return "Too Hot"

```
=IF(A1 <= 0; "Freezing";
   IF(A1 <= 15; "Cold";
      IF(A1 <= 25; "Warm";
         IF(A1 <= 35; "Hot";
            "Too Hot"))))
```

Use `IFS` function (if your Excel supports it):

```
=IFS(A1 <= 0; "Freezing";
     A1 <= 15; "Cold";
     A1 <= 25; "Warm";
     A1 <= 35; "Hot";
     A1 > 35; "Too Hot")
```

5 Random Numbers

5.1 RAND

	A	B	C	D	E	F
1		=RAND()				
2						

```
// A random number between 0 and 1, e.g.
0.5432101234
```

5.2 RANDBETWEEN

	A	B	C	D	E	F
1		=RANDBETWEEN(1; 10)				
2						

```
// A random integer between 1 and 10, e.g.
// The range is inclusive, so 1 and 10 are possible outputs
7
```

6 Date and Time Functions

6.1 NOW

	A	B	C	D	E	F
1		=NOW()				
2						

```
01/12/25 08:10 PM
```

6.2 YEAR

	A	B	C	D	E	F
1		01/12/25 08:10 PM				
2		=YEAR(B1)				

```
2025
```

6.3 MONTH

	A	B	C	D	E	F
1		01/12/25 08:10 PM				
2		=MONTH(B1)				

```
12
```

6.4 DAY

	A	B	C	D	E	F
1		01/12/25 08:10 PM				
2		=DAY(B1)				

```
1
```

6.5 HOUR

	A	B	C	D	E	F
1		01/12/25 08:10 PM				
2		=HOUR(B1)				

```
20
```

6.6 MINUTE

	A	B	C	D	E	F
1		01/12/25 08:10 PM				
2		=MINUTE(B1)				

```
10
```

6.7 SECOND

	A	B	C	D	E	F
1		01/12/25 08:10 PM				
2		=SECOND(B1)				

```
50
```

7 String Functions

7.1 CHAR

	A	B	C	D	E	F
1		=CHAR(65)				
2						

```
A
```

7.2 CODE

	A	B	C	D	E	F
1		=CODE(”B”)				
2						

```
66
```

7.3 UNICODE

	A	B	C	D	E	F
1		=UNICODE("☺")				
2						

```
9786
```

7.4 UNICHAR

	A	B	C	D	E	F
1		=UNICHAR(9786)				
2						

Output: ☺

7.5 LOWER

	A	B	C	D	E	F
1		istanBUL				
2		=LOWER(B1)				

```
istanbul
```

7.6 UPPER

	A	B	C	D	E	F
1		istanBUL				
2		=UPPER(B1)				

```
ISTANBUL
```

7.7 CONCATENATE

	A	B	C	D	E	F
1		İstanbul	University			
2		=CONCATENATE(B1; C1)				

```
İstanbulUniversity
```

	A	B	C	D	E	F
1		İstanbul	University			
2		=CONCATENATE(B1;" "; C1)				

```
İstanbul University
```

7.8 LEFT

	A	B	C	D	E	F
1		İstanbul	University			
2		=LEFT(B1; 3)				

```
İst
```

7.9 RIGHT

	A	B	C	D	E	F
1		İstanbul	University			
2		=RIGHT(B1; 3)				

```
bul
```

7.10 MID

	A	B	C	D	E	F
1		İstanbul	University			
2		=MID(B1; 6; 3)				
3		=MID(C1; 5; 2)				

```
bul
er
```

7.11 LEN

	A	B	C	D	E	F
1		İstanbul	University			
2		=LEN(B1)				
3		=LEN(C1)				

```
8
10
```

7.12 ISTEXT

	A	B	C	D	E	F
1		İstanbul	1453			
2		=ISTEXT(B1)				
3		=ISTEXT(C1)				

```
TRUE
FALSE
```

7.13 ISNONTEXT

	A	B	C	D	E	F
1		İstanbul	1453			
2		=ISNONTEXT(B1)				
3		=ISNONTEXT(C1)				

```
FALSE
TRUE
```

7.14 REPLACE

	A	B	C	D	E	F
1		İstanbul				
2		=REPLACE(A1; 4; 2; ”*”)				
3		=REPLACE(A1; 3; 5; ”?”)				

```
İs*bul
İs?l
```

7.15 SEARCH

	A	B	C	D	E	F
1		İstanbul				
2		=SEARCH(”bul”; A1)				
3		=SEARCH(”tan”; A1)				
4		=SEARCH(”something”; A1)				

```
6
3
#VALUE!
```