

Some Constants:

SUBTOTALS

GRAND TOTAL

ABSOLUTE VALUE

ABS(CONSTANT)

ABS(CELL)

ABS(SIMPLE FORMULA)

ABS(NESTED FORMULA)

ABS(COMPLEX FORMULA)

AND

(CONSTANT)

(CELL)

(RANGE)

(LIST)
(SIMPLE FORMULA)
(NESTED FORMULA)
(COMPLEX FORMULA)

ARCTANGENT(RADIANS)
ATAN(CONSTANT)
ATAN(CELL)
ATAN(FORMULA)
ATAN(FORMULA)
ATAN(COMPLEX FORMULA)

AVERAGE
AVERAGE(CONSTANT)
AVERAGE(CELL)
AVERAGE(RANGE)
AVERAGE(LIST)
AVERAGE(SIMPLE FORMULA)
AVERAGE(NESTED FORMULA)
AVERAGE(COMPLEX FORMULA)

BEEP
Beeps 2 times on recalculation

BORDERS
draw a double line border

CELL
address
col
contents
prefix
protect

row
type
width
CHAR

January
February
March
April
May
June
July
August
September
October
November
December

\$0

CHOOSE

CODE

COLUMN
(CONSTANT)
(CELL)

(LIST)
(SIMPLE FORMULA)
(NESTED FORMULA)
(COMPLEX FORMULA)

COLUMNS

COMPARE

COSINE(RADIANS)
COS(CONSTANT)
COS(CELL)
COS(SIMPLE FORMULA)
COS(NESTED FORMULA)

COS(COMPLEX FORMULA)

COUNT

COUNT(CONSTANT)

COUNT(CELL)

COUNT(RANGE)

COUNT(LIST)

COUNTA

COUNTA(CONSTANT)

COUNTA(CELL)

COUNTA(RANGE)

COUNTA(LIST)

DATE

DAY

DEGREES

DOLLAR

EXACT

EXPONENTIAL (e^x)
EXP(CONSTANT)
EXP(CELL)
EXP(SIMPLE FORMULA)
EXP(COMPLEX FORMULA)

FACT

FALSE
(CONSTANT)
(CELL)
(RANGE)
(LIST)
(SIMPLE FORMULA)
(NESTED FORMULA)
(COMPLEX FORMULA)

FIND

FIXED

FV

HLOOKUP

F
Student's Score

0

87
97
76
95
100
64
75

HOUR

IF(EXPRESSION, TRUE RESULT, FALSE RESULT)
Text comparisons All answers should say 'OK'
EQUAL
GREATER THAN OR EQUAL
LESS THAN OR EQUAL
GREATER THAN
LESS THAN
NOT EQUAL
IF (continued)

Labels to be compared

EQUAL
GREATER THAN OR EQUAL
LESS THAN OR EQUAL
GREATER THAN
LESS THAN
NOT EQUAL

Numeric Comparisons All answers should say 'OK'.

EQUAL
GREATER THAN OR EQUAL
LESS THAN OR EQUAL
GREATER THAN
LESS THAN
NOT EQUAL

IF (continued)

Value cells to be compared

EQUAL
GREATER THAN OR EQUAL
LESS THAN OR EQUAL
GREATER THAN
LESS THAN
NOT EQUAL

Simple Formulas

INDEX
Item
Cajoun
El Cajon
Long Beach
San Andres

INDIRECT

A353

INTEGER

INT(CONSTANT)

INT(CELL)

INT(SIMPLE FORMULA)

INT(NESTED FORMULA)

INT(COMPLEX FORMULA)

IRR

Cash flow

Loan 1

Loan 2

return on above 2 loans

ISBLANK

ISERR

ISERROR

ISERROR(BAD CELL)

ISERROR(GOOD CELL)

ISERROR(RANGE)

ISLOGICAL

ISNA

Cells to be tested:

ISNA(BAD CELL)
ISNA(GOOD CELL)
ISNA(RANGE)

ISNONTEXT

ISNUMBER

ISREF

ISTEXT

LEFT

LEN

NATURAL LOGARITHM

LN(CONSTANT)

LN(SIMPLE FORMULA)

LN(NESTED FORMULA)

LN(COMPLEX FORMULA)

LOGARITHM TO BASE 10

LOG10(CONSTANT)

LOG10(SIMPLE FORMULA)

LOG10(NESTED FORMULA)

LOG10(COMPLEX FORMULA)

LOWER

LOOKUP

Item

Cajoun

El Cajon

Long Beach

San Andres

Using above table:

Long Beach

Cajoun

MATCH

Alan

Bill

Vicki

Will

Using above table:

MAXIMUM VALUE

MAX(CONSTANT)

MAX(CELL)

MAX(RANGE)

MAX(LIST)

MAX(SIMPLE FORMULA)

MAX(NESTED FORMULA)

MAX(COMPLEX FORMULA)

MID

MINIMUM VALUE

MIN(CONSTANT)

MIN(CELL)

MIN(RANGE)

MIN(LIST)

MIN(SIMPLE FORMULA)

MIN(NESTED FORMULA)

MIN(COMPLEX FORMULA)

MINUTE

MODULUS(NUMERATOR,DEMOMINATOR)

MONTH

N
example data
example data

NA

NA()
(SIMPLE FORMULA)

NOT
(CONSTANT)
(CELL)
(RANGE)
(LIST)
(SIMPLE FORMULA)
(NESTED FORMULA)
(COMPLEX FORMULA)

NOW

NPER

NET PRESENT VALUE

Values to use:

12

(CONSTANT)
(CELL)
(RANGE)
(LIST)
(SIMPLE FORMULA)

OR

(CONSTANT)
(CELL)
(RANGE)
(LIST)
(SIMPLE FORMULA)
(NESTED FORMULA)
(COMPLEX FORMULA)

PI

(CONSTANT)
(CELL)
(RANGE)
(SIMPLE FORMULA)
(NESTED FORMULA)
(COMPLEX FORMULA)

PICTURE

PLAYBACK

PMT

PRODUCT

1
2

PROPER

PV

RADIANS

RAND

RATE

REPLACE

REPEAT
(CONSTANT)
(CELL)
(CELL)
(SIMPLE FORMULA)
(NESTED FORMULA)
(COMPLEX FORMULA)

RIGHT

ROUND
(CONSTANT)
(CELL)
(SIMPLE FORMULA)
(SIMPLE FORMULA)
(NESTED FORMULA)
(COMPLEX FORMULA)

ROW
(CONSTANT)
(CELL)
(RANGE)
(LIST)
(SIMPLE FORMULA)
(NESTED FORMULA)
(COMPLEX FORMULA)

ROWS

SEARCH

SECOND

SIGN
(CONSTANT)
(CELL)
(SIMPLE FORMULA)
(NESTED FORMULA)
(COMPLEX FORMULA)

SINE(RADIANS)
SIN(CONSTANT)
SIN(CELL)
SIN(SIMPLE FORMULA)
SIN(NESTED FORMULA)
SIN(COMPLEX FORMULA)

SQUARE ROOT
SQRT(CONSTANT)
SQRT(CELL)

SQRT(SIMPLE FORMULA)
SQRT(NESTED FORMULA)
SQRT(COMPLEX FORMULA)

STANDARD DEVIATION
STDEV(CONSTANT)
STDEV(CELL)
STDEV(RANGE)
STDEV(LIST)

SUM
SUM(CONSTANT)
SUM(CELL)
SUM(RANGE)
SUM(LIST)
SUM(SIMPLE FORMULA)
SUM(NESTED FORMULA)
SUM(COMPLEX FORMULA)

TANGENT
TAN(CONSTANT)
TAN(CELL)
TAN(SIMPLE FORMULA)
TAN(NESTED FORMULA)
TAN(COMPLEX FORMULA)

T

TEXT

TICKS

TIME

TRIM

TRUE
(CONSTANT)
(CELL)
(RANGE)
(SIMPLE FORMULA)
(NESTED FORMULA)
(COMPLEX FORMULA)

TRUNC

TYPE

UPPER

VALUE

VLOOKUP

10000
20000
30000
40000
50000

Using above table

WEEKDAY

YEAR

The next line contains a page break or form feed.

This line should be at the top of a new printed page

Complex formula examples

Nested parenthesis
Nested with functions

Many functions
Many nested functions
24 arguments
Sum of above

Math function tests with full borders

ADD
SUBTRACT
MULTIPLY
DIVIDE
EXPONENT
PERCENT
NESTED PARENTHESIS
HIDDEN CELLS

When a document is in hidden mode, the contents of hidden cells are not printed or displayed on the screen.

Hidden cell

PROTECTED CELLS

When a document is in protected mode only UNPROTECTED cells can be edited. Attempting to edit a protected cell will cause an alert dialog box to be displayed.

Unprotected cell

FORMAT OPTIONS

General
Dollar
Percent
Scientific

SCIENTIFIC NOTATION EXAMPLES

Actual value

0.00018766666

Sheet1

0.0018766666

0.018766666

0.18766666

1.8766666

18.766666

DECIMAL PLACES EXAMPLES

Number of places to right of decimal point

0

1

2

3

4

5

ALIGNMENT EXAMPLES

Left

Center

Right

Negative Number Display Formats

The format is used by all numbers in the worksheet.

Normal

Brackets

Trailing Minus Sign

6 pt
9 pt
10 pt

12 pt

14 pt

18 pt

72pt=1inch

Default font

9 pt
10 pt

12 pt

14 pt

18 pt

24 pt

Plain date
Short Day of Week
Hour & minutes
Hour, minutes & seconds
Long Day of Week

A BiPlane Sampler

This worksheet contains samples of

BiPlane's 102 functions.

NIGHT DIAMONDS SOFTWARE

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Huntington Beach, CA 92647

(714) 842-2492

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For best appearance when paging, adjust grow box to display 18 lines on the screen.

Functions

BiPlane has 102 built-in functions. These represent the most frequently used trigonometric, financial and mathematical functions.

0
1
2
-1
-2.34
-12789.9987
-12790.3387

Correct Answer

5
2.34
4.923076923
11739.01575
0.034058772

TRUE

TRUE

0

TRUE
FALSE

-122772.6858
0.030983867

Correct Answer

1.373400767
-1.166936532
-1.370397773
1.570711141
0.034045611

21.07666667
1.441466667
-2131.723117
46.67948
40.02564102
-8477.11815
1.898019591

Correct Answer

0

0

Biplane can display 7 border styles.




Correct Answer
unprotected number

\$C\$91

2

=CELL("col",B92)
^

0

	96
v	10
	1
B	
}	
	
	
	
Southwest Sales District Forecast	
1991 Sales	
	1000
	1300
	1600
	1900
	2200
	2500
	2800
	3100
	3400
	3700
	4000
	4300

Charts are integrated into BiPlane's worksheets.

Correct Answer	2
----------------	---

Sheet1

	345.6
	0
#VALUE!	3
	3.141592653589
Beeps 1 time	0
	66
	49
	125
	168
	170
Correct Answer	
	5
	0.66
	2
	-3653.953914
	4
	-122770.6858
	0.034058772
	3
	2
	1
Correct Answer	
	0
	0
	0
	0
	0
	0
	0
	0.283662185
	-0.695563326
	0.209132679
	-0.43928163

0.999420056

Correct Answer

1
1
5
5

2
2
11
5

Correct Answer

31770
31770
35434
17022
35434
31889

25
25
9

Today's date

Correct Answer

0
45
60
90
180
270
360

\$1123.455
\$1123.46
\$1123.5
\$1123.
\$987.00
\$1123.46 Balance Due
Correct Answer

0
0
0
0
0
0
0

0.00677946999
0.096327638
0.0072767065
1.034645413

Correct Answer

120
6
6
1

#NUM!

FALSE

-2.34
-1827.191243
-3654.382486
7

TRUE
FALSE
Correct Answer

#VALUE!

7
9
6

#VALUE!

3

987.8
987.77
987.77
-987.8
987.7654

Correct Answer

10803.13
10805.73
-12054.72

65

D
The Grade
B
A
C
A
A+
F
C

Correct Answer

Current hour (24 hour clock)

12

Current hour (12 hour clock)

OK
OK
OK
OK
OK
OK

Alphabet

OK
OK
OK
OK
OK
OK

OK
OK
OK
OK
OK
OK

1234.56

OK
OK
OK
OK
OK
OK

FALSE
TRUE

Correct Answer

Part No.
020-03
100-04
110-07
153-09

110-07

79

List

39

INDIRECT

Correct Answer

-13
-2
4
11739
0

Investment

-100
-1700

18.88%
3.39%

Correct Answer

0
0
0

0
0
0

0
0
0

Correct Answer

15
0
0
0

Plain text

0
0
0

0
0
0

Correct Answer

100
0
0
0
0

0
0

Correct Answer

567
0
0
0
0

Huntington Beach
Night
H
Huntington Beach
Correct

Correct Answer

Huntington Beach

14

16
17
2
3

0.993251773
1.593933726
9.370673253
-3.379667658

Correct Answer

0.431363764
0.692236621
4.06931685
-1.467771015

143 A STREET
tom smith
lower case letters
143 a street
lower

Part No.
020-03
100-04
110-07
153-09

Correct Answer
100-04

145
109
69

020-03
San Andres
#N/A!

	127
Correct Answer	
	3
	3
	4
	7
	4
	2
#N/A!	
	2
	-2.34
	2
	5.55555
	4.923076923
	5.55555
	2
Correct Answer	
Night Diamonds Software	
Night	
Diamonds	
Night	
Diamonds Software	
ware	
	-5
	-2.34
	-12789.9987
	0
	-2.34
	-1
	0.000001
Correct Answer	
Current time	
	27

#DIV/0!	1
	1
ODD	-1
Correct Answer	
Current month	12
	0
	0
	1234
	32204
	1
	0
	0
	0
Correct Answer	
#N/A!	
#N/A!	
FALSE	
FALSE	
FALSE	
FALSE	
	0
FALSE	
FALSE	
Correct Answer	
current date serial number	
today	
time	
month	

day of week

4
3
4
3

Correct Answer

Interest rate:

13
35.76527968
31.33278464
32.77235162
31.33278464

Good Loan

TRUE
TRUE
TRUE
TRUE

0
-122772.6858
0.030983867

Correct Answer

3.141592654
-7.351326809
-12787.19711
12.56637061
12.56637061
9.733868822

0

0

Correct Answer

Thank you

456.85

8

3

360

24

40

1440

Correct Answer

Night Diamonds Software
Mary Smith
2-Cents Worth
123 Main Street

(\$24,033.61)
(\$22,258.38)
(\$54,877.52)
(\$24,297.90)
(\$32,230.94)

Correct Answer

0

0.785398
1.570796
3.141592
4.712389
6.283185

Random number
Another random number

0.77%
10.77%

Correct Answer

row & col
Ms. Jones

<><><><><>
REPEATREPEAT
<><><><><><><><><><>
>>>>> Hello <<<<<
(CELL)(CELL)
Do REPEAT Do REPEAT

Correct Answer

Huntington Beach
Software
h

5

3
3.142
3.1416
9.142
12.566
25.066
11.00305

Correct Answer

741
744
1484
741
745
-739
747
0.225447702730959

10
1

Correct Answer

8
2
1

Current time

14

Correct Answer

-1
1
2

LOSS

2.34

0.958924274
-0.718464793
0.977887274
0.898349403
0.034052187

Correct Answer

9.051243009
4.08080274

Sheet1

3.23778899
0.901250462
2

0.945022045
1.438970543
1.760679373
1.574799506

Correct Answer

51
3.32
-12773.685749
-12772.685749
1.071428571
16.70749062
37964657.64

3.380515006
1.032925063
4.675918067
-2.045042
0.034071947

Correct Answer

Goodday
False

Correct

100.23
Please pay 349

Number of minutes since computer turned on:

Correct Answer

0.0876361
0.5

this is a test

Correct Answer

TRUE

-1.34
-1827.048386
6

TRUE
TRUE

12
99
-99
356

Correct Answer

0
2
1
1
1
16

MARY JONES
APT 12

CORRECT ANSWER

Correct Answer

876.87
100
1
1735

10.00%
15.00%
20.00%
25.00%
28.00%

20.00%
50000

#NA!

10.00%
20.00%

Correct Answer

Today

5

Current year

1991
1950
2004

5.136683417
3.030781671

Sheet1

4.819382814
0.034058772
300

313.020906674

2
99
152490
1.005128205
8
123.45
13.4641016151356

This cell is hiding -->
This cell is hiding -->

This cell is unprotected -->
This cell is protected -->

Correct Answer

926.47
\$926.47
92647.0%
9.26E+2

1.88E-4

Sheet1

1.88E-3

1.88E-02

1.88E-01

1.88E+0

1.88E+1

Correct Answer

10.

10.1

10.12

10.123

10.1235

10.12346

Correct Answer

-9999.99

(9999.99)

9999.99-

Default Font Shown In Available Styles

Bold

Italic

Underline

Outline

Shadow

Condensed

Extended

Default Font in Various Point Sizes

24 pt

52 pt

Examples of Various Fonts and Sizes

Courier

9 pt

10 pt

12 pt

14 pt

18 pt

24 pt

Date and Time Formats

Format examples

4/18/92

Fri, Apr 18, 1992

2:34 PM

2:34:46 PM

Friday, April 18, 1992

THE END

1.1
2.22
3.333
4.4444
5.55555
0.000001
16.652951

-12773.685749

Calculated Answer

5
2.34
4.92307692307692
11739.015749
0.0340587727318528

0
0
0

Sheet1

0
0
-12772.685749
0.0309838667696593

Calculated Answer

1.37340076694502
-1.16693653188752
-1.37039777296902
1.57071114077769
0.034045612498039

21.0766666666667
1.44146666666667
-2131.72311666667
46.67948
40.025641025641
-8477.11814966667
1.89801959091062

Calculated Answer

0

Calculated Answer

100

\$C\$91

2
2

^

0

Sheet1

96

v

10

1

B

}



1992 Sales

1993 Sales

2000	3500
2300	3800
2600	4100
2900	4400
3200	4700
3500	5000
3800	5300
4100	5600
4400	5900
4700	6200
5000	6500
5300	6800

Calculated Answer

3

Sheet1

345.6

0

0

3

3.141592653589

0

0

66

49

125

168

170

Calculated Answer

5

0.66

2

-3653.95391428571

4

-12770.685749

0.0340587727318528

3

2

1

Calculated Answer

0

0

0

0

0

0

0

0.283662185463226

-0.695563326462902

0.20913267968519

-0.439281630255075

0.999420056064499

Calculated Answer

1
1
5
5

2
2
11
5

Calculated Answer

31770
31770
35434
17022
35434
31889

25
25
9
23

Calculated Answer

0
45
60
90
180
270
360

\$1123.455
\$1123.46
\$1123.5
\$1123.
\$987.00
\$1123.46 Balance Due
Calculated Answer

0
0
0
0
0
0

0.0067379469990855
0.096327638230493
0.0072767064993325
1.03464541387867

Calculated Answer

120
6
6
1
0

0
-2.34
-1827.19124285714
-3654.38248571429
7
0
0

Calculated Answer

7
0
9
6

3
0

987.8
987.77
987.77
(987.8)
987.76540

Calculated Answer

10803.1299777277
10805.7334300407
-12054.7173720512

	75	85	95	100
C	B	A	A+	
B				
A				
C				
A				
A+				
F				
C				

Calculated Answer

13
12
1

OK
OK

OK

Zoo

OK
OK

OK
OK

-1234.56

OK
OK

0
0

Calculated Answer

List

Dealer	GSA	
39	27	21
145	101	79
127	88	69
199	139	109

110-07

79

0
0

Numeric Comparisons All answers should say 'OK'.

Calculated Answer

-13
-2
4
11739
0

return

	return	
60		70
800		990
18.88%		
3.39%		

Calculated Answer

0
0
0

0
0
0
0

0
0
0
0

Calculated Answer

0
0
0
0

0

0
0
0

0
0
0

Calculated Answer

7.932E-13
0
0
0
0

0
0

Calculated Answer

-1
0
0
0
0
0

Night
H
Huntington Beach
Correct

Calculated Answer

Sheet1

16
17
2
3

0.993251773010283
1.59393372589814
9.37067325247401
-3.37966763693193

Calculated Answer

0.431363764155757
0.692236621671867
4.06963168523739
-1.46777100537555

tom smith
lower case letters
143 a street
lower

List

Dealer	GSA	
39	27	21
145	101	79
127	88	69
199	139	109

Calculated Answer
100-04

145
109
69

020-03
San Andres

0

127

Calculated Answer

56	72	99	127
6	12	24	48
8	16	32	64
14	28	56	112
4			
2			
0			

2
-2.34

2
5.55555
4.92307692307692
5.55555
2

Calculated Answer

Night
Diamonds

Night
Diamonds Software
ware

-5
-2.34
-12789.9987
0
-2.34
-1
0.000001

Calculated Answer

10
27

Sheet1

0
1
1

ODD

-1

Calculated Answer

4
12

1234
2-Mar-88
1234
32204
1
0
0
0

Calculated Answer

0
0

0
0
0
0
0
0
0
0

Calculated Answer

31889.5487384259
4/22/87
1:10 PM
April

Wednesday

4.00010346399353
2.99995456834819
4.00010346399353
2.99995456834819

Calculated Answer

0.125
14.8
35.7652796829752
31.3327846364883
32.7723516153268
31.3327846364883

Good Loan

0
0
0
0
0
-12772.685749
0.0309838667696593

Calculated Answer

3.141592653589
-7.35132680939826
-12787.1971073464
12.566370614356
12.566370614356
9.73386882233421

0

0

Calculated Answer

Sheet1

0

456.847422791731

15

4

360

24

40

1440

Calculated Answer

Night Diamonds Software

Mary Smith

2-Cents Worth

123 Main Street

(\$24,033.61)

(\$22,258.38)

(\$54,877.52)

(\$24,297.90)

(\$32,230.94)

Calculated Answer

0

0.78539816339725

1.5707963267945

3.141592653589

4.7123889803835

6.283185307178

0.042

0.51

0.0077014723792672

0.107732476433739

Calculated Answer

row & col
Ms. Jones

2

<><><><><>
REPEATREPEAT
<><><><><><><><><><>
>>>>> Hello <<<<<
(CELL) (CELL)
Do REPEAT Do REPEAT

Calculated Answer

Software
h

5

4
3.142
3.1416
9.142
12.566
25.066
11.0030517275876

Calculated Answer

777
780
1520
777
781
-775
783
0.230709051982506

10
1

Calculated Answer

8
2
1

14
12

Calculated Answer

-1
1
2

LOSS

2.34

0.958924274663138
-0.718464793069126
0.977887274836774
0.898349402693876
0.0340521884176931

Calculated Answer

9.05124300855965
4.08080273965797

Sheet1

3.23778898979948
0.90125046261083
2

0.945022045598232
1.4389705428998
1.7606793732818
1.57479950609594

Calculated Answer

51
3.32
-12773.685749
-12772.685749
1.07142857142857
16.7074906224159
37964657.6440349

3.38051500624659
1.03292506337659
4.67591806459324
-2.04504204323827
0.0340719482374442

Calculated Answer

Goodday
False

Correct

349
100.23
Please pay 349

19.0411111111111

Calculated Answer

0.0876736111111111
0.5

this is a test

Calculated Answer

0
-1.34
-1827.04838571429
6
0
0

356.897
12
99
-99
356

Calculated Answer

0
2
1
1
1
16

MARY JONES
APT 12

CORRECT ANSWER

Calculated Answer
1735

876.87
100
1
1735

12500

20.00%
50000
0
10.00%
20.00%

Calculated Answer

3
5

1991
1991
1950
2004

5.13668341708543
3.03078167115903

Sheet1

4.81938281388943
0.0340587727318528
300
313.020906674866

2
99
152490
1.00512820512821
8
123.45
1.35E+01

I am hiding
I could be a comment.

You can change me!
I cannot be changed!!

Calculated Answer

926.47
\$926.47
92647.00%
9.26E+02

1.88E-04

Sheet1

1.88E-03
1.88E-02
1.88E-01
1.88E+00
1.88E+01

Calculated Answer

10.12346
10.123456
10.123456
10.123456
10.123456
10.123456

left
center
right

Calculated Answer

Format in Use

-10000
-10000
-10000

Times

9 pt

10 pt

12 pt

14 pt

18 pt

24 pt

Today's date and time

4/22/87

22-Apr-87

1:10 PM

1:10:12 PM

4/22/87 13:10