**FUNCTIONS**

**Number Functions (also known as Math Functions)**

Number functions accept numeric input and return numeric values. Most of these functions return values that are accurate to 38 decimal digits.

The number functions available in Oracle are:

ABS  ACOS ASIN ATAN ATAN2 BITAND CEIL COS COSH EXP FLOOR LN LOG   
MOD POWER ROUND (number) SIGN SIN SINH SQRT TAN TANH TRUNC (number)

**ABS**

ABS returns the absolute value of n.

The following example returns the absolute value of -87:

SELECT ABS(-87) "Absolute" FROM DUAL;  
  
  Absolute  
  ----------  
        87

**ACOS**

ACOS returns the arc cosine of n. Inputs are in the range of -1 to 1, and outputs are in the range of 0 to pi and are expressed in radians.

The following example returns the arc cosine of .3:

SELECT ACOS(.3)"Arc\_Cosine" FROM DUAL;  
  
Arc\_Cosine  
----------  
1.26610367

Similar to ACOS, you have ASIN (Arc Sine), ATAN (Arc Tangent) functions.

**CIEL**

Returns the highest integer above the given number.

Example:

The following function return the highest integer above 3.456;

select ceil(3.456) “Ciel” from dual;  
  
Ciel  
---------  
        4

**FLOOR**

Returns the lowest integer below the given number.

Example:

The following function return the lowest integer below 3.456;

select floor(3.456) “Floor” from dual;  
  
Floor  
------------  
        3

**COS**

Returns the cosine of an angle (in radians).

Example:

The following example returns the COSINE angle of 60 radians.

select  cos(60) “Cosine” from dual;

**SIN**

Returns the Sine of an angle (in radians).

Example:

The following example returns the SINE angle of 60 radians.

select  SIN(60) “Sine” from dual;

**TAN**

Returns the Tangent of an angle (in radians).

Example:

The following example returns the tangent angle of 60 radians.

select  Tan(60) “Tangent” from dual;

Similar to SIN, COS, TAN  functions hyperbolic functions  SINH, COSH, TANH are also available in oracle.

**MOD**

Returns the remainder after dividing m with n.

Example

The following example returns the remainder after dividing 30 by 4.

Select mod(30,4) “MOD” from dual;  
  
MOD  
---------  
        2

**POWER**

Returns the power of m, raised to n.

Example

The following example returns the 2 raised to the power of 3.

select  power(2,3) “Power” from dual;  
  
POWER  
---------  
        8

**EXP**

Returns the e raised to the power of n.

Example

The following example returns the e raised to power of 2.

select exp(2) “e raised to 2” from dual;  
  
E RAISED TO 2  
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**LN**

Returns natural logarithm of n.

Example

The following example returns the natural logarithm of 2.

select ln(2) from dual;  
  
LN  
------------

**LOG**

Returns the logarithm, base m, of n.

Example

The following example returns the log of 100.

select log(10,100) from dual;  
  
LOG  
---------  
        2

**ROUND**

Returns a decimal number rounded of to a given decimal positions.

Example

The following example returns the no. 3.4573 rounded to 2 decimals.

select round(3.4573,2) “Round” from dual;  
  
Round  
------------  
        3.46

**TRUNC**

Returns a decimal number Truncated to a given decimal positions.

Example

The following example returns the no. 3.4573 truncated to 2 decimals.

select trunc(3.4573,2) “Round” from dual;  
  
Round  
------------  
        3.45

**SQRT**

Returns  the square root of a given number.

Example

The following example returns the square root of  16.

select  sqrt(16) from dual;  
  
SQRT  
---------  
        4

**DOUBLE works in DB@2**

# DOUBLE function

The DOUBLE function returns a floating-point number corresponding to a:

* number if the argument is a numeric expression.
* character string representation of a number if the argument is a string expression.

SELECT EMPNO, DOUBLE(SAL)/COMM

FROM EMP

WHERE COMM > 0