Key *Functions in Oracle SQL*

Use this Quick Reference Guide to locate **functions you** can use **in your queries. There are five tables in this guide: Grouping Functions, Numeric Functions, String Functions,** Date **Functions, and Conversion Functions.**

Grouping functions may include either of the keywords DISTINCT or ALL. ALL is the default if neither is specified and uses all selected rows in the calculation. DISTINCT uses only one row for each value in the calculation.

Example:

- AVG(ALL 2,2,3,3,4) and AVG(2,2,3,3,4) both return 2.8.
- AVG(DISTINCT 2,2,3,3,4) returns 3.

Grouping Functions and Parameters	Meaning and Example
AVG(expression)	Returns the average of the values in a set of rows Example: • AVG(endowment unit_value)
COUNT(expression) or COUNT(*)	Returns the number of rows in the set Note: If you include an expression, COUNT returns only the number of rows in which the expression is not null. COUNT(*) counts all rows. Since no HDW table contains nulls, COUNT(expression) and COUNT(*) are equivalent. Example: • COUNT(*) • COUNT(DISTINCT univ_id_no)
MAX(expression)	Returns the largest value from a set of rows Note: See the GREATEST function if you want the largest of a series of values in a single row. Example (returns the date on which the most recent change was made to dwfnd_rf_tub_cds): • MAX(tub_last_update_dt)

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Grouping Functions (continued)

Grouping Functions and Parameters	**Meaning and Example**
MIN(expression)	Returns the smallest value from a set of rows Note: See the LEAST function if you want the smallest of a series of values in a single row. Example (returns the lowest rate used for fringe-benefit assessments): • MIN(fringe assessment rate)
SUM(expression)	Adds the value for all rows in the query or for all rows with the same values for columns listed in the GROUP BY clause Example: • SUM(pcard_transaction_distr_amt)

Numeric Functions and Parameters	Meaning and Example
ABS(number)	Removes the sign, if any, returning a positive value Example (selects actual_amt values above 10,000 and below —10,000): • ABS(actual_amt) > 10000
GREATEST(value1, value2, ...)	Returns the largest of the values in the list Note: This function is used for multiple values *in the same* row. See the MAX function if you want the largest value from a group of rows. **Example:** • GREATEST(pcard_dt_modified, pcard_dt_reviewed)
LEAST(value1, value2, ...)	Returns the smallest of the values in the list Note: This function is used for multiple values *in the same* row. See the MIN function if you want the smallest value from a group of rows. Example: • LEAST(pcard_dt_modified, pcard_dt_reviewed, pcard swept dt)

Numeric Functions (continued)

Numeric Functions and Parameters	**Meaning and Example**
ROUND(number, decimal places)	Rounds a value to the specified number of decimal places **Example:** • ROUND(123.456,2) returns 123.46 • ROUND(234567.00,-3) returns 235000
TRUNC(number, decimal places)	Cuts off a value at the specified number of decimal places Example: • TRUNC(123.456,2) returns 123.45 • TRUNC(234567.00,-3) returns 234000

String Functions and Parameters	**Meaning and Example**
string || string	Concatenates string values Note: The equivalent CONCAT function accepts only two arguments and is more confusing in queries. **Example:** • vendor city || ', || vendor state || || vendor postal cd
INITCAP(string)	Converts a string to initial capital letters Note: This function will convert "a," "an," and "the" to "A," "An," and "The." **Example:** • INITCAP(vendor_name)
LENGTH(string)	Returns the number of characters in a string **Example:** • LENGTH(full name)
LOWER(string)	Converts a string to all lowercase characters **Example:** • LOWER(view name)

String Functions (continued)

String Functions and Parameters	Meaning and Example
SUBSTR(string, starting value, number of characters)	Extracts a portion of a string Note: If the starting value is 0, it is treated as 1. If the starting-value is negative, Oracle counts backward from the end of the string. If the starting value is positive, Oracle counts forward from the beginning of the string. **Example:** • SUBSTR('ABCDEF',2,3) returns 'BCD' • SUBSTR('abcdef',-4,3) returns 'cde'
UPPER(string)	Converts a string to all uppercase characters **Example:** • WHERE UPPER(lodging_location) LIKE '%CHICAGO%'

Date Functions and Parameters	Meaning and Example
ADD_MONTHS (date, number of months)	Adds the specified number of months to the date value (subtracts months if the number of months is negative) Note: If the result would be a date beyond the end of the month, Oracle returns the last day of the resulting month. **Example** (selects expense reports not settled for more than two months after trip end): • WHERE report gl export dt > ADD MONTHS(report trip_end_or_expense_dt, 2)
LAST DAY(date)	Returns the last day of the month that contains the date **Example** (returns '29-FEB-2000'): • LAST_DAY('15-FEB-2000')

Date **Functions (continued)**

Date Functions and Parameters	Meaning and Example
MONTHS_ BETWEEN(date1, date2)	Returns the difference between two dates expressed as whole and fractional months Note: If date1 is earlier than date2, the result is negative. The result also takes into account time differences between the two values. **Example** (returns 1.03225806): • MONTHS_BETWEEN('02-FEB-2001','01-JAN-2001')
NEXT_DAY(date, day name)	Returns the date of the first day of the specified name that is later than the date supplied Example (returns '20-MAR-2001'): • NEXT_DAY('14-MAR-2001','TUESDAY')
ROUND (datetime, format)	Returns the date-time rounded to the unit specified by the format, or to the nearest day if no format is supplied Note: For details on available formats, see the full description of functions (below). Example: (returns '01-JAN-2000') • ROUND('27-OCT-1999', 'YEAR')
SYSDATE	Returns the current date-time from the server where the database is located **Example** (returns rows posted the previous day): • WHERE je posted dt = TRUNC(SYSDATE) — 1
TRUNC(datetime)	Removes the time component from a date-time value Note: This function has other truncating options. See the full description of functions (below) for details. Example: • WHERE TRUNC(je_posted_dt) = '12-OCT-99'

Conversion Functions and Parameters	Meaning and Example
TO_CHAR(date, format)	Converts a date to a string in the specified format Note: For details on available formats, see the full description of functions (below). **Example:** • TO_CHAR(je_posted_dt, 'Month DD, YYYY')
TO CHAR(number, format)	Converts a number to a string in the specified format **Example:** • TO CHAR(fund spec invest amt,'$9,999,999')
TO DATE(string, format)	Converts a string to a date using the specified format Note: Oracle automatically converts dates in the standard format of DD-MON-YYYY. Example: • TO_DATE('01-02-1999', 'DD-MM-YYYY')
TO_NUMBER (string, format)	Converts a string to a number using the optional format if specified Note: For details on available formats, see the full description of functions (below). **Example:** • TO_NUMBER('100.00','9G999D99') • TO NUMBER(TO CHAR§e posted dt, 'YYYY'))