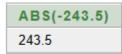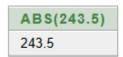# NUMERIC FUNCTIONS

1. SELECT ABS(-243.5) FROM DUAL;
   ABS is a function used to return the absolute (non-negative) value of a numeric expression. It converts the negative number to its positive equivalent.
   DUAL is a dummy table in Oracle, used when you want to perform a calculation or retrieve a value without selecting from an actual table.
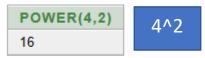
ABS(-243.5)
243.5

   1 rows returned in 0.00 seconds

   SELECT ABS(243.5) FROM DUAL;

ABS(243.5)
243.5

   1 rows returned in 0.00 seconds

2. SELECT POWER(4,2) FROM DUAL;

POWER(4,2)
16

   4^2

   1 rows returned in 0.00 seconds

   SELECT POWER(3,2) FROM DUAL;

POWER(3,2)
9

   1 rows returned in 0.02 seconds

   SELECT POWER(-3,3) FROM DUAL;

POWER(-3,3)
-27

   1 rows returned in 0.00 seconds

3. SELECT ROUND (2.234) FROM DUAL;

ROUND(2.234)
2

1 rows returned in 0.00 seconds

SELECT ROUND (2.50) FROM DUAL;

ROUND(2.50)
3

1 rows returned in 0.00 seconds

SELECT ROUND (2.99) FROM DUAL;

ROUND(2.50)
3

1 rows returned in 0.00 seconds

SELECT ROUND (234.999, 2) FROM DUAL;

ROUND(234.999,2)
235

Here the output is 235 because when we round off 999 it will obviously give 00 therefore it doesn't as it usually will when we use a number we have to round off to. For e.g.

SELECT ROUND (234.799, 2) FROM DUAL;

ROUND(234.799,2)
234.8

4. SELECT SQRT(25) FROM DUAL;

SQRT(25)
5

1 rows returned in 0.00 seconds

SELECT SQRT(17) FROM DUAL;

SQRT(17)
4.12310562561766054982140985597407702515

1 rows returned in 0.00 seconds   CSV Export

5. SELECT EXP(1) FROM DUAL;

EXP(1)
2.71828182845904523536028747135266249776

1 rows returned in 0.00 seconds   CSV Export

SELECT EXP(-5) FROM DUAL;

EXP(-5)
.00673794699908546709663604842314842449

1 rows returned in 0.00 seconds   CSV Export

6. SELECT EXTRACT(YEAR FROM DATE'2003-01-22') FROM DUAL;

EXTRACT(YEARFROMDATE'2003-01-22')
2003

1 rows returned in 0.00 seconds   CSV Export

SELECT EXTRACT(DAY FROM DATE'2003-01-22') FROM DUAL;

EXTRACT(DAYFROMDATE'2003-01-22')
22

1 rows returned in 0.00 seconds   CSV Export

We can only use extract to get the numeric values of the day, month, or the year and it can not be used to get the name of the same.

7. SELECT GREATEST(30,6,5,9) FROM DUAL;

GREATEST(30,6,5,9)
30

SELECT GREATEST(30,6,5,30.0) FROM DUAL;

GREATEST(30,6,5,30.0)
30

SELECT GREATEST(30.2,6,5,30.1) FROM DUAL;

GREATEST(30.2,6,5,30.1)
30.2

8. SELECT LEAST(30,6,5,9) FROM DUAL;

LEAST(30,6,5,9)
5

Same as greatest.

9. SELECT MOD(18,4) FROM DUAL;

MOD(18,4)
2

The MOD function returns the remainder of the division of the first argument by the second argument.
SELECT MOD(2,4) FROM DUAL;

MOD(2,4)
2

The function calculates the remainder of the division of the first argument (2) by the second argument (4). Since 2 divided by 4 equals 0 with a remainder of 2, the output of the query will be 2.

10. SELECT TRUNC(5.556,2) FROM DUAL;

TRUNC(5.556,2)
5.55

The TRUNC function is used to truncate a number to a specified number of decimal places.

11. SELECT FLOOR(12.45) FROM DUAL;

FLOOR(12.45)
12

SELECT FLOOR(12.66) FROM DUAL;

FLOOR(12.66)
12

This essentially "rounds down" the decimal value to the nearest integer.

12. SELECT CEIL(12.45) FROM DUAL;

CEIL(12.45)
13

SELECT CEIL(12.99) FROM DUAL;

CEIL(12.99)
13

This essentially "rounds up" the decimal value to the nearest integer.

STRING FUNCTIONS

1. SELECT LOWER('HAHAHAHAHAHAHA') FROM DUAL;

LOWER('HAHAHAHAHAHAHA')
hahahahahahaha

   return the lowercase version of the string

2. SELECT INITCAP('HEHEHEHE HAAAHAHA') FROM DUAL;

INITCAP('HEHEHEHEHAAAHAHA')
Hehehehe Haaahaha

   return the string with the first letter of each word capitalized and the rest in lowercase

3. SELECT UPPER('hehehehe hahahhaha') FROM DUAL;

UPPER('HEHEHEHEHEHAHAHHAHA')
HEHEHEHEHE HAHAHHAHA

   return the uppercase version of the string

4. SUBSTR function is to extract a substring from the string
   SELECT SUBSTR('tanviii',2,4) FROM DUAL;

SUBSTR('TANVIII',2,4)
anvi

5. SELECT ASCII('A') FROM DUAL;

ASCII('A')
97

   It returns the ASCII value of the character 'A'. In ASCII encoding, each character is represented by a numerical value.

6. SELECT INSTR('tanviii','i') FROM DUAL;

INSTR('TANVIII','I')
5

   find the position of the first occurrence of the character 'i' within the string 'tanviii'.

7. SELECT TRANSLATE('tanviii','an','va') FROM DUAL;

TRANSLATE('TANVIII','AN','VA')
tvaviii

8. SELECT LENGTH('tanvi') FROM DUAL;

LENGTH('TANVI')
5

9. SELECT LTRIM('tanvi','ta') FROM DUAL;

LTRIM('TANVI','TA')
nvi

10. SELECT RTRIM('tanvi','vi') FROM DUAL;

RTRIM('TANVI','VI')
tan

11. SELECT TRIM(BOTH 'S' FROM 'SANDS') FROM DUAL;

TRIM(BOTH'S'FROM'SANDS')
AND

SELECT TRIM(LEADING 'S' FROM 'SANDS') FROM DUAL;

TRIM(LEADING'S'FROM'SANDS')
ANDS

SELECT TRIM(TRAILING 'S' FROM 'SANDS') FROM DUAL;

TRIM(TRAILING'S'FROM'SANDS')
SAND

12. SELECT LPAD('tanvi',7,'t') FROM DUAL;

LPAD('TANVI',7,'T')
tttanvi

13. SELECT RPAD('tanvi',7,'i') FROM DUAL;

RPAD('TANVI',7,'I')
tanviii