MEASUREMENT

Return a string containing binary representation of a number

```
BIN (12) = '1100'
```

Return length of argument in bits

```
BIT LENGTH ('MySql') = 40
```

Return number of characters in argument

```
CHAR_LENGTH ('MySql') = 5
CHARACTER LENGTH ('MySql') = 5
```

Return the length of a string in bytes

```
LENGTH ('Ö') = 2

LENGTH ('A') = 1

OCTET_LENGTH ('Ö') = 2

OCTET LENGTH ('X') = 1
```

Return a soundex string

```
SOUNDEX ('MySql') = 'M240'
SOUNDEX ('MySqlDatabase') = 'M24312'
```

Compare two strings

```
STRCMP ('A', 'A') = 0

STRCMP ('A', 'B') = -1

STRCMP ('B', 'A') = 1
```

SEARCH

Return the index of the first occurrence of substring

```
INSTR ('MySql', 'Sql') = 3
INSTR ('Sql', 'MySql') = 0
```

Return the position of the first occurrence of substring

```
LOCATE ('Sql', 'MySqlSql') = 3

LOCATE ('xSql', 'MySql') = 0

LOCATE ('Sql', 'MySqlSql', 5) = 6

POSITION('Sql' IN 'MySqlSql') = 3
```

Pattern matching using regular expressions

```
'abc' RLIKE '[a-z]+' = 1
'123' RLIKE '[a-z]+' = 0
```

Return a substring from a string before the specified number of occurrences of the delimiter

```
SUBSTRING_INDEX ('A:B:C', ':', 1) = 'A'
SUBSTRING_INDEX ('A:B:C', ':', 2) = 'A:B'
SUBSTRING_INDEX ('A:B:C', ':', -2) = 'B:C'
```

CONVERSION

Return numeric value of left-most character

```
ASCII ('2') = 50
ASCII (2) = 50
ASCII ('dx') = 100
```

Return the character for each number passed

```
CHAR (77.3,121,83,81, '76, 81.6') = 'MySQL'
CHAR (45*256+45) = CHAR (45,45) = '--'
CHARSET(CHAR (X'65' USING utf8)) = 'utf8'
```

Decode to / from a base-64 string

```
TO_BASE64 ('abc') = 'YWJj'
FROM_BASE64 ('YWJj') = 'abc'
```

Convert string or number to its hexadecimal representation

```
X'616263' = 'abc'

HEX ('abc') = 616263

HEX(255) = 'FF'

CONV(HEX(255), 16, 10) = 255
```

Convert each pair of hexadecimal digits to a character

```
UNHEX ('4D7953514C') = 'MySQL'
UNHEX ('GG') = NULL
UNHEX (HEX ('abc')) = 'abc'
```

Return the argument in lowercase

```
LOWER ('MYSQL') = 'mysql'
LCASE ('MYSOL') = 'mysal'
```

Load the named file

```
SET blob col=LOAD FILE ('/tmp/picture')
```

Return a string containing octal representation of a number

```
OCT (12) = '14'
```

Return character code for leftmost character of the argument

```
ORD ('2') = 50
```

Escape the argument for use in an SQL statement

```
QUOTE ('Don\'t!') = 'Don\'t!'

QUOTE (NULL) = 'NULL'
```

Convert to uppercase

```
UPPER ('mysql') = 'MYSQL'
UCASE ('mysql') = 'MYSQL'
```

MODIFICATION

```
Return concatenated string
```

```
CONCAT ('My', 'S', 'QL') = 'MySQL'
CONCAT ('My', NULL, 'QL') = NULL
CONCAT (14.3) = '14.3'
```

Return concatenate with separator

```
CONCAT_WS (',', 'My', 'Sql') = 'My,Sql'
CONCAT_WS (',','My',NULL,'Sql') = 'My,Sql'
```

Return a number formatted to specified number of decimal places

```
FORMAT (12332.123456, 4) = 12,332.1235

FORMAT (12332.1, 4) = 12,332.1000

FORMAT (12332.2, 0) = 12332.2

FORMAT (12332.2, 2, 'de_DE') = 12.332,20
```

Insert a substring at the specified position up to the specified number of characters

```
INSERT ('12345', 3, 2, 'ABC') = '12ABC5'
INSERT ('12345', 10, 2, 'ABC') = '12345'
INSERT ('12345', 3, 10, 'ABC') = '12ABC'
```

Return the leftmost number of characters as specified

```
LEFT ('MySql', 2) = 'My'
```

Return the string argument, left-padded with the specified string

```
LPAD ('Sq1', 2, ':)') = 'Sq'
LPAD ('Sq1', 4, ':)') = ':Sq1'
LPAD ('Sq1', 7, ':)') = ':):)Sq1'
```

Remove leading spaces

```
LTRIM (' MySql') = 'MySql'
```

Repeat a string the specified number of times

```
REPEAT ('MySQL', 3) = 'MySQLMySQLMySQL'
```

Replace occurrences of a specified string

```
REPLACE ('NoSql', 'No', 'My') = 'MySql'
```

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```
Reverse the characters in a string
```

```
REVERSE ('MySql') = 'lqSyM'
```

Return the specified rightmost number of characters

```
RIGHT ('MySql', 3) = 'Sql'
```

Returns the string argument, right-padded with the specified strin.

```
RPAD ('Sq1', 2, ':)') = 'Sq'
RPAD ('Sq1', 4, ':)') = 'Sq1:'
RPAD ('Sq1', 7, ':)') = 'Sq1:):)'
```

Remove trailing spaces

```
RTRIM ('MvSal ') = 'MvSal'
```

Return a string of the specified number of spaces

```
SPACE ('6') = '
```

Return the substring as specified

```
SUBSTRING=SUBSTR=MID('MySql',3) = 'Sql'
SUBSTRING=SUBSTR=MID('MySql' FROM 4) = 'ql'
SUBSTRING=SUBSTR=MID('MySql',3,1) = 'S'
SUBSTRING=SUBSTR=MID('MySql',-3) = 'Sql'
SUBSTRING=SUBSTR=MID('MySql' FROM -4 FOR 2)
= 'yS'
```

Remove leading and trailing spaces

```
TRIM(' MySql ') = 'MySql'
TRIM(LEADING 'x' FROM 'xxxSqlMy') = 'MySql'
TRIM(BOTH 'My' FROM 'MySqlMy') = 'Sql'
TRIM(TRAILING 'Sql' FROM 'MySql') = 'My'
```

SETS

Return string at index number

```
ELT (1, 'ej', 'Heja', 'hej', 'foo') = 'ej'
ELT (4, 'ej', 'Heja', 'hej', 'foo') = 'foo'
```

Return a string such that for every bit set in the value bits, you get an on string and for every unset bit, you get an off

```
EXPORT_SET (5,'Y','N',',',4) = 'Y,N,Y,N'

EXPORT_SET (6,'1','0',',',6) = '0,1,1,0,0,0'
```

Return the index (position) of the first argument in the subsequent arguments

```
FIELD ('ej','Hj','ej','Heja','hej','oo') = 2
FIELD ('fo','Hj','ej','Heja','hej','oo') = 0
```

Return the index position of the first argument within the second argument

```
FIND_IN_SET ('b', 'a,b,c,d') = 2
FIND_IN_SET ('z', 'a,b,c,d') = 0
FIND_IN_SET ('a,', 'a,b,c,d') = 0
```

Return a set of comma-separated strings that have the corresponding bit in bits set

```
MAKE_SET (1,'a','b','c') = 'a'
MAKE_SET (1|4,'ab','cd','ef') = 'ab,ef'
MAKE_SET (1|4,'ab','cd',NULL,'ef') = 'ab'
MAKE_SET (0,'a','b','c') = ''
```