

Data Type	String Functions	Date Functions	Mathematical Functions (cont)
Exact Numerics	ASCII REPLICATE	DATEADD (datepart, number, date) SYSDATETIME()	LOG CEILING
bit decimal	CHAR REVERSE		ROUND FLOOR
tinyint money	CHARINDEX RIGHT		SQRT SQUARE
smallint numeric	DIFFERENCE RTRIM		SIGN
bigint	LEFT SOUNDEX	DATEDIFF (datepart, start, end) SYSUTCDATETIME()	
Approximate Numerics	LEN SPACE		Dateparts
float real	LOWER STR	DATENAME (datepart, date) SYSDATETIME-MEOFFSET()	Year yy, yyyy
Date and Time	LTRIM STUFF		Quarter qq, q
smalldatetime timestamp	NCHAR SUBSTRING	DATEPART (datepart, date) SWITCH-OFFSET (DATETIME-OFFSET, time_zone) YEAR (date)	Month mm, m
datetime	PATINDEX UNICODE		Day of Year dy, y
Strings	REPLACE UPPER QUOTENAME		Day dd, d
char text			Week wk, ww
varchar	Type Conversion		Hour hh
Unicode Strings	CAST (expression AS datatype)	DAY (date) ISDATE (expression)	Minute mi, n
nchar ntext	CONVERT (datatype, expression, [style])	GETDATE() MONTH (date)	Second ss, s
nvarchar		GETUTC-DATE() YEAR (date)	Millisecond ms
Binary Strings	Grouping (Aggregate) Functions		Object Operation
binary image	AVG MAX	Mathematical Functions	Stored Procedure
varbinary	BINARY_CHECKSUM MIN	ABS LOG10	CREATE PROCEDURE <name> AS <sql_statement>
Miscellaneous	CHECKSUM SUM	ACOS PI	Views
cursor table	CHECKSUM_AVG STDEV	ASIN POWER	CREATE VIEW<name>[(-<Column>, ...)]
sql_variant xml	COUNT STDEVP	ATAN RADIANS	AS <SELECT_statement>
	COUNT_BIG VAR	ATN2 RAND	Triggers
	GROUPING VARP	COT SIN	
		TAN EXP	
		COS DEGREES	



Object Operation (cont)

```
> CREATE TRIGGER <name>
ON <table>
FOR INSERT, UPDATE,
DELETE AS <sql_statement>

Functions
CREATE FUNCTION <name>
RETURNS <data_type>
AS BEGIN <sql_statement>
RETURN <sql_expression> END
```

Create a Stored Procedure

```
CREATE PROCEDURE name
@variable AS datatype =
value
AS
-- Comments
SELECT * FROM table
GO
```

Table Functions

ALTER	DROP
CREATE	TRUNCATE

Ranking Functions

RANK	NTILE
DENSE RANK	ROW_NUMBER

Foreign Key Construct

```
ALTER TABLE <table1>
WITH CHECK
ADD CONSTRAINT <constraintName>
FOREIGN KEY (<table1>
column1)
REFERENCES <table2>
(<table2>
column2)
```

Drop Constraint

```
ALTER TABLE <tablename>
DROP
CONSTRAINT <constraintName>
```

Primary Key construct

```
ALTER TABLE <tablename>
ADD CONSTRAINT
<constraintName>
PRIMARY KEY CLUSTERED
(columnList)
```

Create an Index

```
CREATE UNIQUE INDEX name
ON
table (columns)
```

T-SQL Statements

UPDATE Statement

```
UPDATE table_name
SET column_name = (expression)
[WHERE <search_condition>]
[WHERE <search_condition>]
[WHERE <search_condition>]
```

DELETE Statement

```
DELETE [FROM] table_name
[WHERE <search_condition>]
[WHERE <search_condition>]
```

INSERT Statement

```
INSERT [INTO] table_name
[(column_list)]
VALUES ((DEFAULT | NULL
| expression 1[,...n])
```

Select Statement Construct

```
SELECT [DISTINCT] [(TOP
int | TOP int PERCENT)]
Column list
[INTO new_table]
FROM table_source
[[[INNER | { LEFT |
RIGHT | FULL } [OUTER]]]
JOIN | CROSS APPLY]
table_source2
ON table_source.primary_key =
table_source2.foreign_key[,...n]
[WHERE search_condition]
[GROUP BY group_by_expression]
[HAVING search_condition]
[ORDER BY order_expression [ASC | DESC]]
```