

## Date Formatting and Math

JSONata uses something called a “picture string” to let you decide how your date and time shows up. Basically, you put together a mix of shortcuts and symbols to tell it which bits you want—like year, month, hour, and so on.

Here’s how it works:

- **Component Specifiers:** These are simple codes for each part of the date and time. For example, [Y] means year, [M] is month, [D] is day, [H] is hour (24-hour), [h] is hour (12-hour), [m] is minute, [s] is second, and [ZN] is time zone name.
- **Literal Text:** Anything in your string that isn’t a shortcut gets added as-is to the output.
- **Modifiers:** You can tweak things like the number of digits, make parts uppercase, or add padding (like [Y0001] to make sure the year is always four digits long).
- **Separators:** Use dashes, colons, or spaces to break up the different parts however you want.

### Examples:

See: [date-formatting-and-math.json](#) for for field reference

Field	Format	JSONata	Result
Now	ISO 8601	\$now()	2025-08-16T00:40:29.741Z
Now	Milliseconds	\$millis()	1755304829741
Now	Formatted Date/Time	\$fromMillis(\$millis(), '[M01]/[D01]/[Y0001] [h#1]:[m01][P]')	08/16/2025 12:40am
date	Formatted Date	\$fromMillis(\$toMillis(` date `), "[Y]-[M]-[D]"), "[MNn] [D], [Y]")	November 16, 1997
dateWords	Reformatted Date	\$fromMillis(\$toMillis(` dateWords `), '[MNn] [D], [Y]', '[M01]/[D01]/[Y0001]')	10/16/1997
date	Elapsed time in years	\$floor((\$millis() - \$toMillis(` date `), '[Y]-[M]-[D]')) / 1000 / 60 / 60 / 24 / 365.25)	27