formstyle

FS_Sum: totals and number helpers

How-to for the formsett™ document-level JavaScript

FS_Sum is not a function. It is the name of the whole script block, taken from its @name line. Blueprint adds the block to a PDF when **Add document-level JavaScript** is ticked. It contains six functions. One of them, FS__doc0f (double underscore), is internal: the other functions use it to find the PDF, and you never call it yourself.

The functions

Function	What it does	Returns
`FS_ToNumber(v)`	Turns any value into a number. It removes everything except digits, `.` and `-`, so `"$1,234.50"` becomes `1234.5`. Blank or text becomes `0`.	a number
`FS_Num("name")`	Gets one field's value as a number, using `FS_ToNumber`. A missing or blank field gives `0`.	a number
`FS_SumFields([...])`	Adds up a list of fields you name.	a number
`FS_SumGroup("parent")`	Adds up every field under one parent name, without listing them.	a number
`FS_Round(n, places)`	Rounds to a number of decimal places.	a number

Day to day you'll mostly use `FS_Num`, `FS_SumFields`, `FS_SumGroup` and `FS_Round`. `FS_ToNumber` mainly works behind the scenes.

Where the scripts go

All the examples below go in a field's **Calculate > Custom calculation script** in Acrobat, which in Blueprint means the `clcl` / `clcr` fields. Each needs `event.value =` at the front, because the functions only return a number. Blueprint already gives these fields a placeholder script, `event.value = FS_SumFields(["Num1", "Num2", "Num3"]);`. Replace Num1–Num3 with real field names, or swap in one of the examples.

Examples

Add up specific fields

Use `FS_SumFields` when the fields are scattered or you only want some of them.

```
event.value = FS_SumFields(["nddr.01", "nddr.02", "nddr.05"]);
```

Add up a whole column

Blueprint names fields like `nddr.01`, `nddr.02`, `nddr.03` and so on, so they all sit under the parent `nddr`. One `FS_SumGroup` call adds them all, including any rows you add later.

```
event.value = FS_SumGroup("nddr");
```

Add up one page's column

With **Add page number to field names** on, it can add up one page's column. This also picks up rows on spawned pages, as long as they keep the group name.

```
event.value = FS_SumGroup("03.nddr");
```

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Subtract

Use FS_Num to read single fields.

```
event.value = FS_Num("nddr.01") - FS_Num("nddr.02");
```

Multiply and round

For example, hours × rate to the cent.

```
event.value = FS_Round(FS_Num("nwl.01") * FS_Num("nddl.01"), 2);
```

GST on a column total

```
event.value = FS_Round(FS_SumGroup("nddr") * 0.1, 2);
```

Grand total of two subtotals

```
event.value = FS_SumFields(["clcr.01", "clcr.02"]);
```

Things to watch

- **Keep the total out of its own group.** `FS_SumGroup("nddr")` must not sit in an `nddr` field, or it would add itself in. Blueprint's totals are `clcl/clcr` fields, which avoids this.
- **Don't sum a whole page by its number.** `FS_SumGroup("03")` would take in every field on page 3, text included. Use it with a single field type, like `03.nddr`.
- **Why the sums round to 10 places.** `FS_SumFields` and `FS_SumGroup` round internally to 10 places. That cleans up computer arithmetic slips like 0.1 + 0.2 = 0.30000000000000004 without changing real values. For money, still wrap the result in `FS_Round(…, 2)`.
- **Dashes count as minus signs.** `FS_ToNumber` keeps `-`, so `"1-2"` becomes an invalid number and counts as 0. That only matters in free-text fields; Blueprint's number fields stop that from being typed.
- **Totals blank at zero.** In fields where Blueprint also adds `FS_BlankZero()` as validation, such as the `clcl/clcr` totals, a total of 0 shows blank rather than `0.00`.
- **Keep the script in the PDF.** These calls only work while the FS_Sum block is in the PDF's document-level JavaScript (Acrobat: *Tools* > *JavaScript* > *Document JavaScripts*, script name `formsett`).