

Pluralize — *Smooth CoffeeScript*

This literate program is *interactive* in its HTML form. Edit a CoffeeScript segment to try it.

How do you add 's' to a word when there is more than one of something?

It is often seen in JavaScript with the ternary operator `?:` but that is hard-coding at the expense of future maintenance and internationalization.

First some preliminaries. Let's `show` the results whether we are running in a server or a web client. Something like `show = if exports? then console.log else alert`. And wrap the different methods in a `test` function so we can see if they work.

```
test = (points) ->
```

Readable ways

The simplest readable way

```
show "0: You got #{points} point#{if points > 1 then 's' else ''}"
```

Encapsulate in a function, future i18n will be easier

```
pluralIf = (stem, cond) -> stem + (if cond then 's' else '')
show "1: You got #{points} #{pluralIf 'point', points > 1}"
```

Encapsulate in a function, handle negative numbers

```
pluralUnless = (stem, cond) -> stem + (unless cond then 's' else '')
show "2: You got #{points} #{pluralUnless 'point', -2 < points < 2}"
```

Encapsulate in a String method, could collide with another definition

```
String::pluralIf ?= (cond) -> this + (if cond then 's' else '')
show "3: You got #{points} #{'point'.pluralIf points > 1}"
```

Tricks

Use the existential operator to catch the singular undefined

```
show "4: You got #{points} point#{('s' if points > 1) ? ''}"
```

Convert the condition to a number and do an array lookup

```
show "5: You got #{points} point#{['', 's'][+(points > 1)]}"
```

Use the inverted condition to ask for a letter.

```
true => charAt 1 => '' — false => charAt 0 => 's'
```

```
show "6: You got #{points} point#{'s'.charAt points <= 1}"
```

Create an array whose length is determined by the condition. It consists of empty elements so join it with 's'

```
show "7: You got #{points} point#{Array(1+(points>1)).join 's'}"
```

Concatenate to an empty array, undefined does nothing

```
show "8: You got #{points} point#{[].concat ('s' if points > 1)}"
```

Contributed

Create an array with either 's' or undefined — from [satyr](#)

```
show "9: You got #{points} point#{['s' if points > 1]}"
```

Test

Run a test for a small range of numbers

```
test n for n in [-3..3]
```

Output

```
1 0: You got -3 point
2 1: You got -3 point
3 2: You got -3 points
4 3: You got -3 point
5 4: You got -3 point
6 5: You got -3 point
7 6: You got -3 point
8 7: You got -3 point
9 8: You got -3 point
10 9: You got -3 point
11 0: You got -2 point
12 1: You got -2 point
13 2: You got -2 points
14 3: You got -2 point
15 4: You got -2 point
16 5: You got -2 point
17 6: You got -2 point
18 7: You got -2 point
19 8: You got -2 point
20 9: You got -2 point
21 0: You got -1 point
22 1: You got -1 point
23 2: You got -1 point
24 3: You got -1 point
25 4: You got -1 point
26 5: You got -1 point
27 6: You got -1 point
28 7: You got -1 point
29 8: You got -1 point
30 9: You got -1 point
31 0: You got 0 point
32 1: You got 0 point
33 2: You got 0 point
34 3: You got 0 point
35 4: You got 0 point
36 5: You got 0 point
37 6: You got 0 point
38 7: You got 0 point
39 8: You got 0 point
40 9: You got 0 point
41 0: You got 1 point
42 1: You got 1 point
43 2: You got 1 point
44 3: You got 1 point
45 4: You got 1 point
46 5: You got 1 point
47 6: You got 1 point
48 7: You got 1 point
49 8: You got 1 point
```

```

50 9: You got 1 point
51 0: You got 2 points
52 1: You got 2 points
53 2: You got 2 points
54 3: You got 2 points
55 4: You got 2 points
56 5: You got 2 points
57 6: You got 2 points
58 7: You got 2 points
59 8: You got 2 points
60 9: You got 2 points
61 0: You got 3 points
62 1: You got 3 points
63 2: You got 3 points
64 3: You got 3 points
65 4: You got 3 points
66 5: You got 3 points
67 6: You got 3 points
68 7: You got 3 points
69 8: You got 3 points
70 9: You got 3 points

```

JavaScript

```

1  (function() {
2      var n, test;
3
4      test = function(points) {
5          var pluralIf, pluralUnless, _base, _ref, _ref2;
6          show("0: You got " + points + " point" + (points > 1 ? 's' : ''));
7          pluralIf = function(stem, cond) {
8              return stem + (cond ? 's' : '');
9          };
10         show("1: You got " + points + " " + (pluralIf('point', points > 1)));
11         pluralUnless = function(stem, cond) {
12             return stem + (!cond ? 's' : '');
13         };
14         show("2: You got " + points + " " + (pluralUnless('point', (-2 < points && points < 2))));
15         if ((_ref = (_base = String.prototype).pluralIf) == null) {
16             _base.pluralIf = function(cond) {
17                 return this + (cond ? 's' : '');
18             };
19         }
20         show("3: You got " + points + " " + ('point'.pluralIf(points > 1)));
21         show("4: You got " + points + " point" + ((_ref2 = (points > 1 ? 's' : void 0)) != null ? _ref2 : ''));
22         show("5: You got " + points + " point" + ['', 's'][+(points > 1)]);
23         show("6: You got " + points + " point" + ('s'.charAt(points <= 1)));
24         show("7: You got " + points + " point" + (Array(1 + (points > 1)).join('s')));
25         show("8: You got " + points + " point" + ([].concat((points > 1 ? 's' : void 0))));
26         return show("9: You got " + points + " point" + [points > 1 ? 's' : void 0]);
27     };
28
29     for (n = -3; n <= 3; n++) {
30         test(n);
31     }
32
33 }).call(this);

```

Formats [CoffeeScript](#) [Markdown](#) [PDF](#) [HTML](#)

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