

[11.10] *solve()* may return false solutions for trigonometric expressions

Executing the *solve()* function as shown:

```
solve(tan(x-1)/(x-1)=0,x)
```

returns

```
x = @n1*[E + 1
```

The 89/92+ use the notation @n1 to indicate an arbitrary integer, which usually includes 0. In this case, $x = 1$ is not a solution, since the expression is undefined at $x = 1$.

solve() does not even return the correct result for the limit as x approaches 1, since

$$\lim_{x \rightarrow 1} \frac{\tan(x-1)}{x-1} = 1$$

This effect is also shown if *tan()* is replaced with *sin()*.

(Credit to Timité Hassan)