# Rtex Knitr in CoCalc 

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Boring stuff as usual:

```
1+1
## [1] 2
    x=rnorm(5); t(x)
## [,1] [,2] [,3] [,4] [,5]
## [1,] 0.2950348 0.6188449 -1.766488 0.7433172 -1.358912
```

For the cached chunk below, you will need to wait for 3 seconds for the first time you compile this document, but it takes no time the next time you run it again.

```
set.seed(123)
x = runif(10)
sd(x) # standard deviation
## [1] 0.29474
Sys.sleep(3) # test cache
```

Now we know the first element of x is 0.2875775 . And we also know the 26 letters are A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z. An expression that returns a value of length 0 will be removed from the output, but it was indeed evaluated, i. e. now the first element of $x$ becomes 2011.

How about figures? Let's use the Cairo PDF device (assumes $\mathrm{R} \geq 2.14 .0$ ).

```
plot(cars) # a scatter plot
```



Warnings, messages and errors are preserved by default.

```
sqrt(-1) # here is a warning!
## Warning in sqrt(-1): NaNs produced
## [1] NaN
message('this is a message you should know')
## this is a message you should know
1+'a' # impossible
## Error in 1 + "a": non-numeric argument to binary operator
```

