1. Create a Cocalc/Sage Cloud account.
   (a) Start the Chrome browser.
   (b) Go to http://cocalc.com
   (c) “Create new account” using your VCU mymail email address.
   (d) You should see an existing Project for our class. Click on that.
   (e) Click “New”, then “Worksheets”, then call it c01.

   The multiplication operator in Sage is “*”. The most common error in Sage is forgetting to put in a “*” when multiplying.

2. Find $900(1 + 0.06(90/365))$.

3. Find $25^2$ and $25^{10}$.

   Sage uses only curved parentheses for grouping. The common square parentheses are reserved in Sage for lists.

4. Find $\frac{550 \left[ 1 + (1.05)^{-30} \right]}{0.05}$

   Sage returns exact expressions (no rounding error) when possible.

5. Find an exact expression for $\sqrt{8}$.

   You often have to force Sage to give you a decimal approximation of what you’ve calculated.

6. Use $n(\_)$ to find a decimal approximation for $\sqrt{8}$.

   What can you do for other roots besides sqrt?

7. Find $\sqrt[6]{50}$.

8. Evaluate “pi”. Then use $n(\_)$ to find a decimal approximation for $\pi$.

9. Evaluate “e”. Find a 6-digit approximation for $e$.
10. Find a 6-digit approximation for $e^3$

11. Find $\log_{10} 10$

12. Find $\log_{10} 10$

13. Find $\sin \frac{\pi}{3}$

14. Find $\tan \frac{\pi}{2}$

15. Find $\arcsin \frac{1}{2}$

Sage doesn’t understand degrees–only radians. What can you do here?

16. Find $\sin 47^\circ$, and a decimal approximation.

17. Type in “i” and evaluate.

18. Find $i^3$ by hand, then check it with Sage.

plot is Sage’s powerful and flexible command for plotting functions of a single variable.

19. Sketch the graph of $x^3$ on the interval $(-2, 2)$.

20. Sketch the graph of $|x - 1|$ on a “nice” interval.

21. Sketch $\cos x$.

22. Sketch $\cos t$. What happens? What do you think the difference is?