

**LARSON—MATH 255—HOMEWORK WORKSHEET h01**  
**Getting Started.**

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 email address** .
  - (d) You should see an existing Project for our class. Click on that.
  - (e) Click “New”, then “Sage Worksheet”, then call it **h01**.
  - (f) For each problem number, label it in the Sage cell where the work is. So for Problem 1, the first line of the cell should be **#Problem 1**.
2. Find  $900(1 + .06(90/365))$ .
3. Find  $47^2$ .
4. Find  $550 \frac{[1 + (1.05)^{-30}]}{0.05}$ .
5. Find an exact expression for  $\sqrt{153}$ .
6. Find a decimal approximation for  $\sqrt{153}$ .
7. Find  $\sqrt[6]{153}$ .
8. Find  $i^{21}$ .
9. Find a 10-digit decimal approximation for  $\pi$ .
10. Find a 10-digit decimal approximation for  $\sqrt{2}$ .
11. Find a 10-digit approximation for  $e$
12. Find a 10-digit approximation for  $e^3$
13. Find  $\log 10$  (here,  $\log$  means  $\ln$ ).
14. Find  $\log_{10} 111$ .
15. Find  $\cos \frac{\pi}{3}$
16. Find  $\tan \frac{\pi}{4}$ .

17. Find  $\arcsin \frac{1}{2}$
18. Find  $\sin 87^\circ$ , and a decimal approximation.
19. Sketch the graph of  $x^2 - 9$  on the interval  $(-5, 5)$ .
20. Sketch the graph of  $|x - 1|$  on a “nice” interval.
21. Sketch one period of  $\sin x$ .

### **Getting your homework recorded**

When you are done writing up your nicely annotated code examples...

- (a) Click the Printer-icon button and make a pdf of this worksheet. (If Cocalc hangs, click the *File* button, then Save-and-Download as pdf)
- (b) Send me an email with an informative header like “Math 255—h01 worksheet attached” (so that it will be properly recorded).
- (c) Remember to attach your homework worksheet pdf!