

**MAT 130, Homework, Due Wed. 9/27/23**

Name

1. Solve for  $x$  on  $[0, 2\pi)$ .

$$\cos x + 1 = 0$$

$$3 \sin x - 2 = 5 \sin x - 1$$

2. Verify  $\cos x - \cos x \sin^2 x = \cos^3 x$

3. Solve for  $x$ .

$$4^x = 15$$

$$3^{x-4} = 7^{2x+5}$$

4. Expand.

$$\ln \frac{x^4}{\sqrt{y}}$$

$$\ln \frac{(x+7)^3}{x^4}$$