TMATH 124 UH: Quiz 4

Show *all* your work (numerically, algebraically, or geometrically) for each and simplify. No credit is given without supporting work.

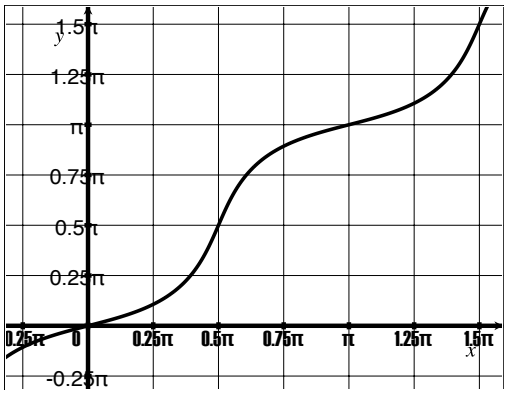
1. Find $\frac{dy}{dx}$ given:

   [2] (ImplicitWks #1b)
   $y\cos(x) = y^2$

   [2] (WebHW12 #6)
   $y = \log_7(\sqrt{2x+7})$

   [3] (LogWks #1)
   $y = x^{\sqrt{x}}$

2. (§3.5 #26) Consider $\sin(x+y) = 2x - 2y$ whose graph is provided on the right.



(a) [1] Draw the equation of the line that is tangent to $f(x)$ when $x = \pi$.

(b) [2] Find the equation of the line you drew in part a.