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MA 442
Spring 2021

Homework 6

Due March 10th on paper at the beginning of class. Justify your answers. Please let me know if you have a question or find a mistake.

1. Exercises 2, 3, and 6 of `https://www.math.purdue.edu/~kdatchev/442/s274.pdf`. The statement of Exercise 2 should read 'Show that the image of the parametric curve...' rather than 'Show that the parametric curve...'
   Hint: To show something is not a manifold in these problems, it is probably simplest to find a point p for which you can show that if $F = 0$ on M then $DF(p) = 0$.
2. Exercise 2.6 of `https://www.math.purdue.edu/~kdatchev/442/geodesics.pdf`.