

**Applied Finite Mathematics**  
**Graph Coloring Graded Assignment**  
*Due Monday, November 2<sup>nd</sup> by 11:59 pm*

**Directions:** Submit your answers/solutions to problems #10, 12, 16, 18 and 22 on p. 329-330 in your textbook.

For each of the problems, you must provide thorough explanations and/or justifications for your answers.

Incomplete justifications of your answers will not earn full credit.

*\*\*Note: For #16 above, you may use the resource that your book recommends that allows you to color a map of the United States for practice.*

- Go to [http://www.sailor.lib.md.us/MD\\_topics/kid/col\\_applet/color.html](http://www.sailor.lib.md.us/MD_topics/kid/col_applet/color.html).
- In the drop-down menu labeled “Flag,” choose “US Map.”
- Click “Load Image,” and a blank map with assorted color choices appears for you to practice with.

*In your write-up, include labels on your states (or the vertices of the graph you represent the US with) with the name of the appropriate color. This way, I will be able to determine the color if you fax your assignment. Also, feel free to print out a map of the US or make a copy of the one in your textbook on p. 318 so that you don’t have to draw the map yourself! ☺*

*Don’t forget to explain why it is impossible to color the map with fewer than four colors.*

**Turning the Assignment In:** You may type your answers and submit them to me electronically, or you may write your answers and fax (919-416-2890) or scan and email them to me.

**Getting Help:** You are to complete this assignment on your own. You may consult your textbook, notes and any content in this course and you may definitely contact me with questions. However, you **may not** consult anyone else, whether they are a student in this class or not.