

Math 71A – Final Exam Study Guide

Spring 2016, Prof. Beydler

Final Exam

- Date: Monday, June 6, 2016 from 4:30pm to 7:00pm
- Will cover all sections in this class.
- No notes or books during the test. For this test, you can use a **scientific calculator**.
- Please visit my office hours if you need help. If you don't understand something, don't be embarrassed to stop by—I'm very patient. If you can't make it to my office hours, then feel free to e-mail me with any questions: dbeydler@mtsac.edu Also, don't forget to visit the MARC and get extra credit for doing so! (see syllabus for details)

Here are some (definitely not all!) of the basic formulas, equations, and concepts you'll want to know:

- (2.4) Slope: $m = \frac{y_2 - y_1}{x_2 - x_1}$, Standard form: $Ax + By = C$, Slope-intercept form: $y = mx + b$
- (2.5) Point-slope form: $y - y_1 = m(x - x_1)$
- (2.4) Horizontal lines: $y = b$, and vertical lines: $x = a$
- (2.5) parallel \leftrightarrow same slope (also two vertical lines are parallel)
- (2.5) perpendicular \leftrightarrow slopes are negative reciprocals (also, vertical and horizontal lines are perpendicular)
- (4.3) $|\square| = c$ means $\square = c$ or $\square = -c$
- (4.3) $|\square| < c$ means $-c < \square < c$, $|\square| > c$ means $\square > c$ or $\square < -c$
- (5.2) $(A + B)^2 = A^2 + 2AB + B^2$, $(A - B)^2 = A^2 - 2AB + B^2$, $(A + B)(A - B) = A^2 - B^2$
- (5.5) $A^2 + 2AB + B^2 = (A + B)^2$
 $A^2 - 2AB + B^2 = (A - B)^2$
 $A^2 - B^2 = (A + B)(A - B)$
 $A^3 + B^3 = (A + B)(A^2 - AB + B^2)$
 $A^3 - B^3 = (A - B)(A^2 + AB + B^2)$

Extra Credit!

- If you write up the answers to all of the review exercises (see Final Exam Review Exercises on the class website), and hand them in at the test, you can earn up to 3% extra credit towards your test (depending on neatness and completeness)! These review exercises are not guaranteed to cover everything.
- If you go to a tutoring center at Mt. SAC for 4 hours between Test #3 and the Final Exam, you'll get 1% extra credit towards the Final Exam.