

Math 1050 Chapters 5 and 6 Test Review

About the test:

There will be two parts to the test. The portion without the calculator will be the majority of the test. Once you've finished with it, you'll turn it in and get the portion of the test that you may use the calculator on. Once you have turned in the first portion, you may not go back to it.

Things to know:

- composition of functions
- inverse functions: horizontal Line Test, graphing inverses, finding the formula of an inverse
- exponential functions: properties, graphing, evaluating, applications
- logarithmic functions: properties, changing logs to exponents and vice versa, graphing, special bases, applications
- properties of logarithms (memorize), changing bases, combining/expanding logarithms
- solving logarithmic and exponential equations (careful of extraneous solutions!), applications to interest, population growth, radioactive decay (memorize $A = Pe^{rt}$ and $A(t) = A_0e^{kt}$)
- conics: match geometric definitions, graph, find equations, applications (memorize equations, terminology)

Extra Credit Review: (10 points possible, due **at the time you take the test**)

- 5.1: 11,30
- 5.2: 19,24,46,58,71a
- 5.3: 11c,18,29-36,45,80
- 5.4: 4,12,16,19,23,26,27,36,39,57,67-75,82,93,106,117
- 5.5: 3-5,8,11,14,16,50,61,63,66
- 5.6: 3,4,11,17,22,29
- 5.7: 6,32,33
- 5.8: 1,4,9
- 6.2: 22,33,40,45,57,58
- 6.3: 18,29,42,43,58
- 6.4: 17,31,37,43,48

Formulas that will be provided:

- change of base formula: $\log_a M = \frac{\log_b M}{\log_b a}$
- compound interest formula: $A = P\left(1 + \frac{r}{n}\right)^{nt}$
- ellipse: $a^2 - b^2 = c^2$, a is larger
- hyperbola: $a^2 + b^2 = c^2$