

MAC 2311 EXAM III TOPICS (9th Ed.)

- 3.1 ① Implicit differentiation (10)
- 0.5 ② Using properties of logarithms; solving logarithmic and exponential equations; change of base formula; word problems with a given equation. (15)
- 3.2, 3.3 ③ Derivatives of logarithmic and exponential functions; logarithmic differentiation technique. (20)
- 3.3 ④ Using the derivative to decide if a function has an inverse. (5)
- 3.3 ⑤ Derivative involving inverse trig. function(s) (5)
- 3.6 ⑥ Indeterminate forms $\frac{0}{0}$, $\frac{\infty}{\infty}$, L'Hôpital's Rule (10)
- 3.6 ⑦ Other indeterminate forms (and non-indeterminate forms)* (15)
- 4.1, 4.2 ⑧ Graph a polynomial including increasing, decreasing, concavity, arms, y intercept, etc. (10)
- 4.1, 4.2 ⑨ Analyze a function involving fractional exponents, exponentials, logarithms, or trig. fns. (10)

* other indeterminate forms:

$$0 \cdot \infty, \infty - \infty, 0^0, \infty^0, 1^\infty$$

Non-indeterminate forms: $\infty + \infty$, 0^∞ , etc.