Outline for Exam 2

The second exam will cover sections 6.2, 6.7-6.9, 7.2-7.5 and 7.6. The topics by section are:


**6.7, 6.8:** Definitions, properties and calculus of the the inverse trigonometric functions.

**6.9:** Definitions, properties and calculus of the hyperbolic functions cosh, sinh, tanh and sech.

**7.2:** Integration by parts.

**7.3:** Trigonometric integration techniques.

**7.4:** Partial fraction decomposition. Linear and irreducible quadratic factors.

**7.5:** L’Hôpital’s rule and indeterminate forms. Limits of the sort $0 \cdot \infty$, $\frac{\infty}{\infty}$, $1^\infty$ etc.

**7.7:** Improper integrals. Unbounded domains of integration, unbounded integrands, combinations thereof.