

Group Exam 1

Name: _____

Math 141, 11:30AM

Name of group member: _____

Professor Johnson

Name of group member: _____

Problem 1: (i) Draw the graph of a function $y = f(x)$ with domain $[1, 3] \cup (6, 7]$ and range $[2, 10]$ which is one to one.

(ii) Evaluate $\cos(\frac{5\pi}{6})$.

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Problem 2: Suppose a population of rabbits triples every 6 months, and at $t = 0$ there are 40 rabbits. Find a function $P(t)$ which describes the number of rabbits in this population as a function of t , where t is time in years.

How long will it take for the population to be 1500 rabbits?

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Problem 3: Find the inverse of the function $f(x) = e^{-\sqrt{x}} + 1$.

Find the domain and range of $f(x)$.

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