

Name: _____

MATH 125

Date: 10/28

Quiz 4A

Problem 1. (16 Points) Find the domain, asymptotes, critical points and inflection points of the function $f(x) = x + \frac{1}{x^2} - 1$ and finally sketch the graph of this function.

Problem 2. (8 Points) Let R be a rectangle with length a and side b , so that $\frac{a}{b} = \frac{4}{3}$. Let d be the length of the diagonal. If d increases at the rate of 2cm/s, what's the rate that the area A of R grows when $d = 5$ cm?

Final Score: _____

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MATH 125

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Quiz 4B

Problem 1. (16 Points) Find the domain, asymptotes, critical points and inflection points of the function $f(x) = x^2 + \frac{1}{x} - 1$ and finally sketch the graph of this function.

Problem 2. (8 Points) Let R be a rectangle with length a and side b , so that $\frac{a}{b} = \frac{12}{5}$. Let d be the length of the diagonal. If d increases at the rate of 2cm/s, what's the rate that the area A of R grows when $d = 13$ cm?

Final Score: _____