

---

# MATH 103 200710 Quiz 2

Edward Doolittle

Tuesday, March 6, 2007

Please do both of the following problems. Each problem is worth 10 marks. You have 20 minutes to finish the quiz.

1. Find the asymptotes to the function  $R(x) = \frac{36}{x} + 4x + 1$ ,  $x > 0$ . Also show that  $x = 3$  is a local minimum of  $R$ . Use that information to sketch a graph of  $R$ .

- 
2. Find the stationary points of the function  $f(x) = -2x^3 - 3x^2 - 3$  and determine whether each of the stationary points is a local maximum, local minimum, or neither. Use that information to sketch a quick graph of the function. **It is not necessary to find inflection points or intercepts!**