QUIZ 2 - MATH 112 Friday, January 24

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Read each problem **very carefully** before starting to solve it. Each problem is worth 5 points. It is necessary to show **all** your work. Correct answers without explanations are worth 0 points. GOOD LUCK!!

1. Consider the graph of $f(x) = -x^2 + 4x - 3$.
   (a) Find the vertex.
   (b) What is the opening direction?
   (c) What is its y-interecept?
   (d) What are its x-interecepts?
   (e) Sketch the graph clearly labeling all important points.

2. Compute and simplify the difference quotient of $f(x) = x^2 - 7x$ at the point x.