Chapter 3

Performance Assessment REVIEW

NO GRAPHING CALCULATOR

Consider the function $f(x)=\frac{1}{4}x^4-\frac{9}{4}x^2-x+3$

1. Rewrite $f(x)$ as the product of a rational number and a polynomial with integer coefficients.

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2. List the possible rational zeros of $f(x)$.

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3. Factor $f(x)$. Use synthetic division, if necessary.

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4. Identify the x-intercepts, the y-intercept, points between the zeros, and end behavior.

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5. Use the information from Problem 4 to sketch the function.