Algebra 2H HW #_____ Section 3-6 and Review

Do all problems on your own paper. Be sure to show only the work leading to the solution (no scratch work.)

Find all zeros and graph.

1. $f(x) = x^3 - 7x^2 + 10x + 6$
2. $f(x) = 2x^4 + 3x^3 - 7x^2 + 3x - 9$

3. If -2 and $\frac{1}{4}$ are zeros of $f(x) = 4x^5 - 9x^4 - 22x^3 + 34x^2 + 17x - 6$, find all zeros and graph.

Find the zeros and write each function in factored form with <u>linear</u> factors that do not contain fractions.

4. $f(x) = x^3 + 2x^2 - 5x - 10$
5. $f(x) = 15x^3 + 16x^2 - 7x$
6. $f(x) = 5x^5 - 40x^3 + 80x$
7. $f(x) = x^4 - 81$

Selected Answers: 1. $3, 2 \pm \sqrt{6}$ 2. $-3, \frac{3}{2}, \pm i$ 3. $-2, \frac{1}{4}, 3, \frac{1 \pm \sqrt{5}}{2}$ 4. $-2, \pm\sqrt{5}$ 5. $0, \frac{1}{3}, \frac{-7}{5}$ 6. $0, \pm 2$ 7. $\pm 3i, \pm 3$

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