Advanced Algebra

Disguised Quadratics Assignment #6

Factor the following problems, state the roots, and then use the derivative to state whether this graph will be a smooth parabola like graph, and "M" or a W type graph. Then based on your information, make the sketch of the graph. You can then check in your calculator.

1) $y=3x^4-2x^2+12$ 2) $y=x^4+x^2-12$

3) $y=-2x^4+6x^2+24$ 4) $y= 2x^4-4x^2+12$

5) $y=-x^4+8x^2-12$ 6) $y=x^4+5x^2-36$

Challenge Problems. Do the same as before...stating where the "hump(s)" are in the graph. Make a good sketch of the graph. Challenge is to process this with the derivative and Not just looking at Calculator.

7) $y=x-4x^{.5}-21$ 8) $y=2x-4x^{.5}-6$