



## Advanced Math Assignment 1

Graph each of the following functions. Use a Graphing Calculator to find the following:

- |                 |                         |
|-----------------|-------------------------|
| a) Domain       | e) Relative Maximums    |
| b) Range        | f) Relative Minimums    |
| c) Zeros        | g) Increasing Intervals |
| d) Y-intercepts | h) Decreasing Intervals |

1)  $F(x) = -x^2 + 2x + 8$

2)  $F(x) = x^3 + 3x^2 - 2x - 4$

3)  $F(x) = -\frac{3}{2}x - 4$

4)  $F(x) = x^4 - 6x^2 + 9$

5)  $F(x) = \sqrt{x+4} + 2$

6)  $F(x) = -2$

7)  $F(x) = -x^3 + 2x^2 + 5$

8)  $F(x) = -\frac{1}{2}x^4 - 2x^3 - \frac{1}{4}x^2 + 4x + 6$