

Group Memebers: \_\_\_\_\_

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### Classwork 4 – Functions

Pick two of the following functions. For each function, find all  $x$ -intercepts,  $y$ -intercepts, horizontal and vertical asymptotes, critical numbers, intervals of increase and decrease and local extrema.

1.  $f(x) = \frac{x}{x^2 + 1}$

2.  $f(x) = 2 - \frac{x}{x+1}$

3.  $f(x) = -\frac{2}{3}x^3 - 4x^2 + 24x + 2$

4.  $f(x) = |x^2 - 4|$