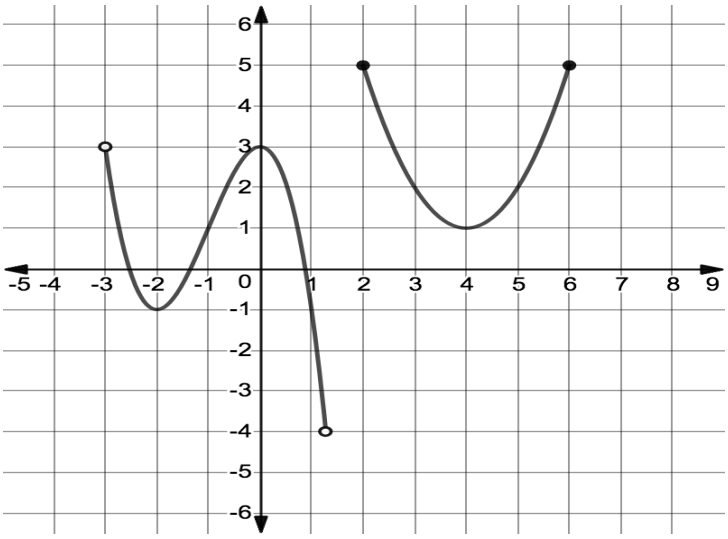
Names: _____ Group #: _____

1. Consider the following graph below.



Identify all relative and absolute extrema, values and locations, if they exist.

(a) Absolute Maximum:

(c) Absolute Minimum:

(b) Relative Maxima:

(d) Relative Minima:

2. Find the absolute maximum and minimum values and their locations of the following functions on the given intervals.

(a) $f(x) = \sin\left(x + \frac{\pi}{2}\right)$; $\left[0, \frac{3\pi}{2}\right]$

(b) $f(x) = \ln(x^2 + x + 1)$; $[-1, 1]$

(c) $g(x) = 6x^5 - 5x^6$; $(-\infty, \infty)$

(d) $h(x) = (9 - x^2)^{2/3} - 5$; $(-\infty, 0)$