5.2 Critical Points
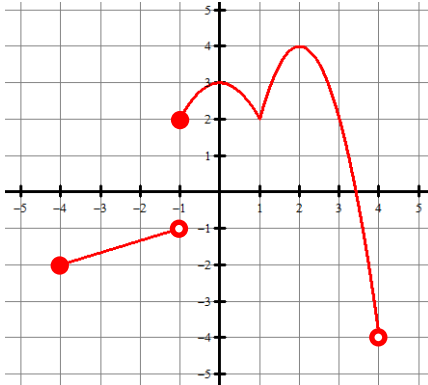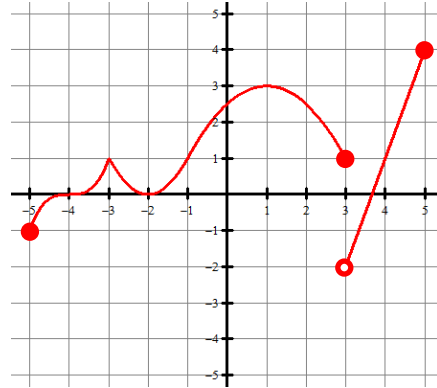
Calculus   Name: _____

Find all extreme values. Identify the type and where they occur. For example, an answer could be written as "absolute max of 3 at $x = 1$."

1.

2.

Find the critical points of each function.

3. $f(x) = x^2(x - 3)$

4. $g(t) = (t + 2)^{\frac{2}{3}}$

5. $h(x) = x + \dfrac{32}{x^2}$

6. $f(x) = x^2 \ln x$

7. $h(x) = 2\cos(2x)$ where $-\pi \le x \le \pi$