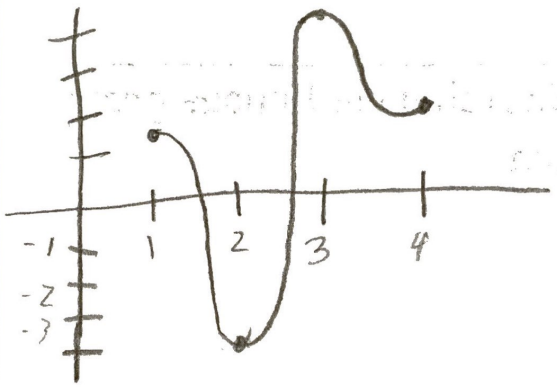
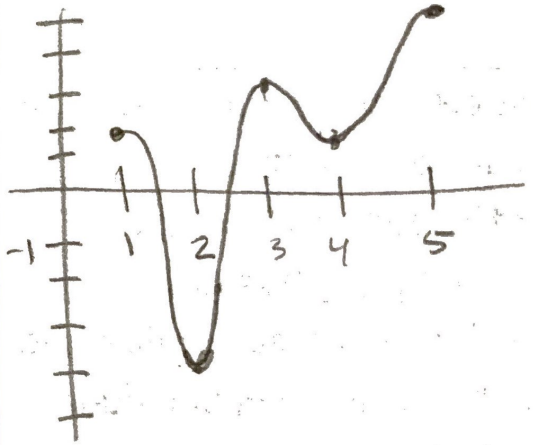
Sketch a graph with that meets the following conditions:

Abs Min at x=2
Abs Max at x=3
Local Min at x=4



Abs max at x=5, abs min at x=2, local max at x=3, local min at x=2 & 4



Find the critical numbers for f(x): (see video for #1)

1. $f(x) = x^3 + 6x^2 - 15x$

Calculus

Math2413 Calc1 Chapter 4: Function Analysis Name:_____

Exit Ticket Upload:

Find the abs min/max using the candidates test:

7. $f(x) = 2x^3 - 3x^2 - 12x + 1$ on $[-2,3]$

① $f'(x) = 6x^2 - 6x - 12$

$6(x^2 - x - 6)$

$= 6(x-3)(x+2)$

~~$x = 6$~~

$x = 3$

$x = -2$

interval $[-2,3]$

② $f(-2) = 2(-2)^3 - 3(-2)^2 - 12(-2) + 1 \Rightarrow$ (-8)

$-16 - 12 + 24 + 1$

$-28 + 24 + 1 = -3$

$f(3) = 2(3)^3 - 3(3)^2 - 12(3) + 1 \Rightarrow$

$2(27) - 27 - 36 + 1 \Rightarrow 8$

abs min $(3, -8)$

abs max $(-2, -3)$