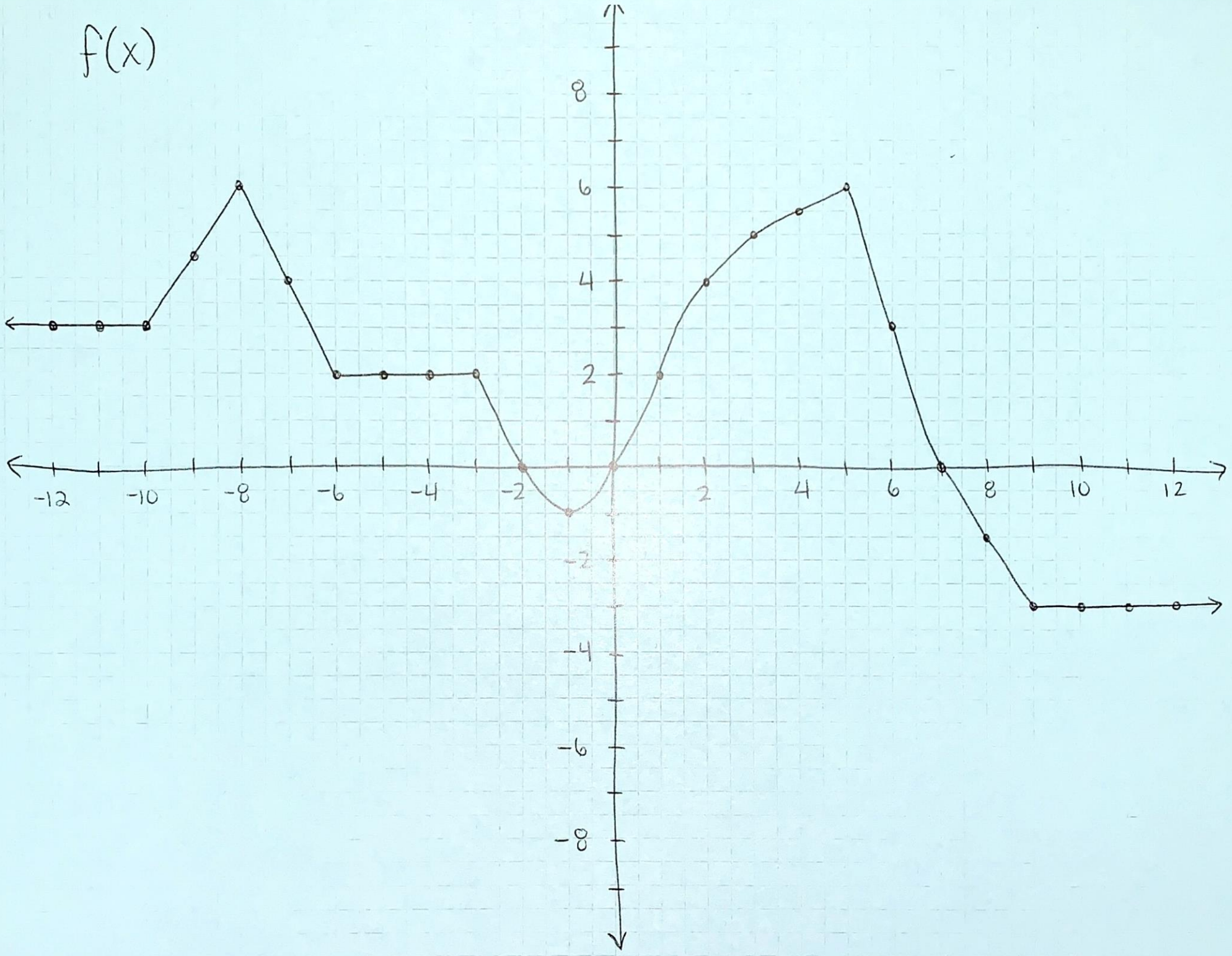


STATION 1

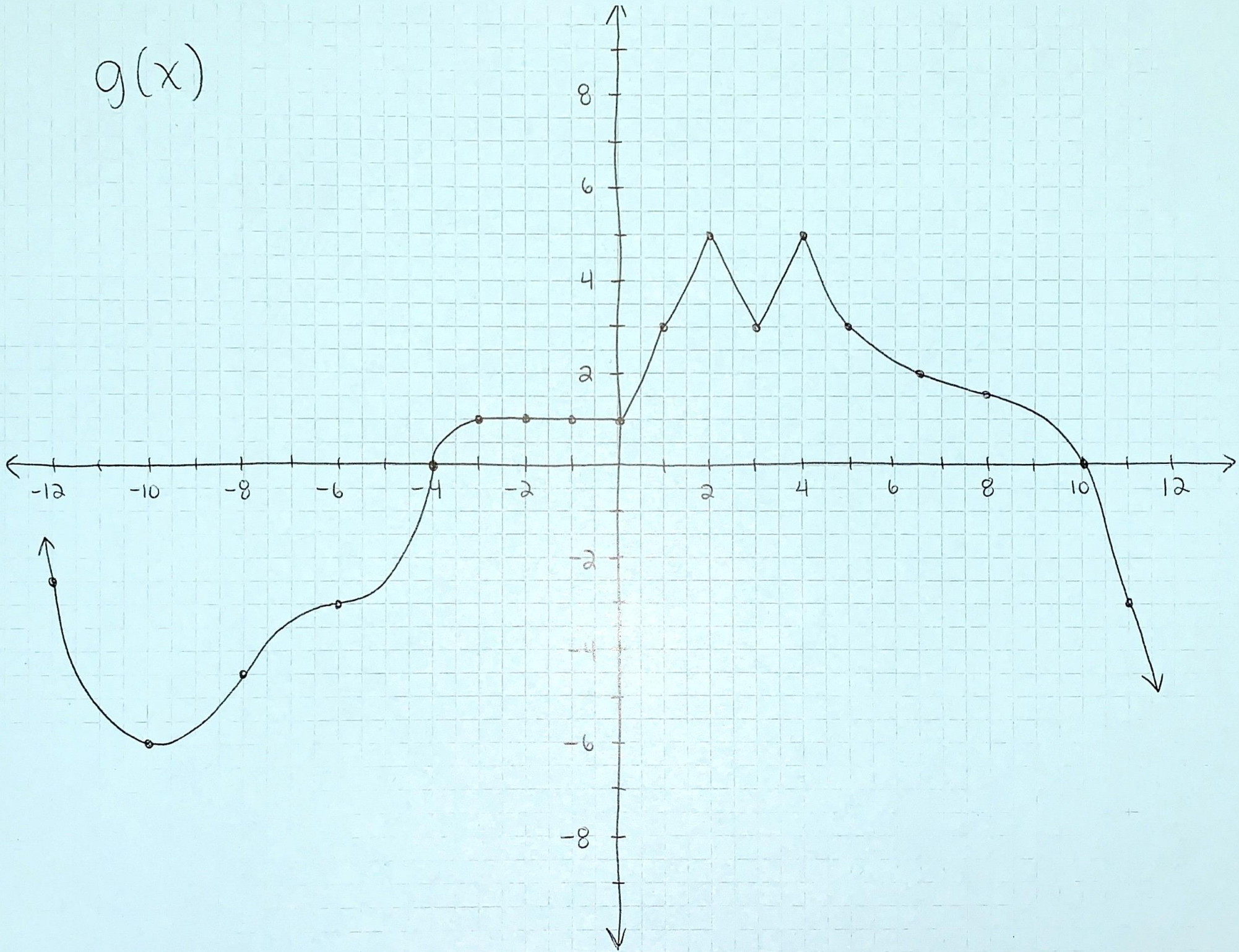
Directions: Find the following for each graph...

1. Domain
2. Range
3. X-intercepts
4. y-intercept
5. Intervals of increasing
6. Intervals of decreasing
7. Intervals of constant
8. Local minimum(s)
9. Local maximum(s)
10. $f(0)$
11. $f(-8)$
12. $f(5)$

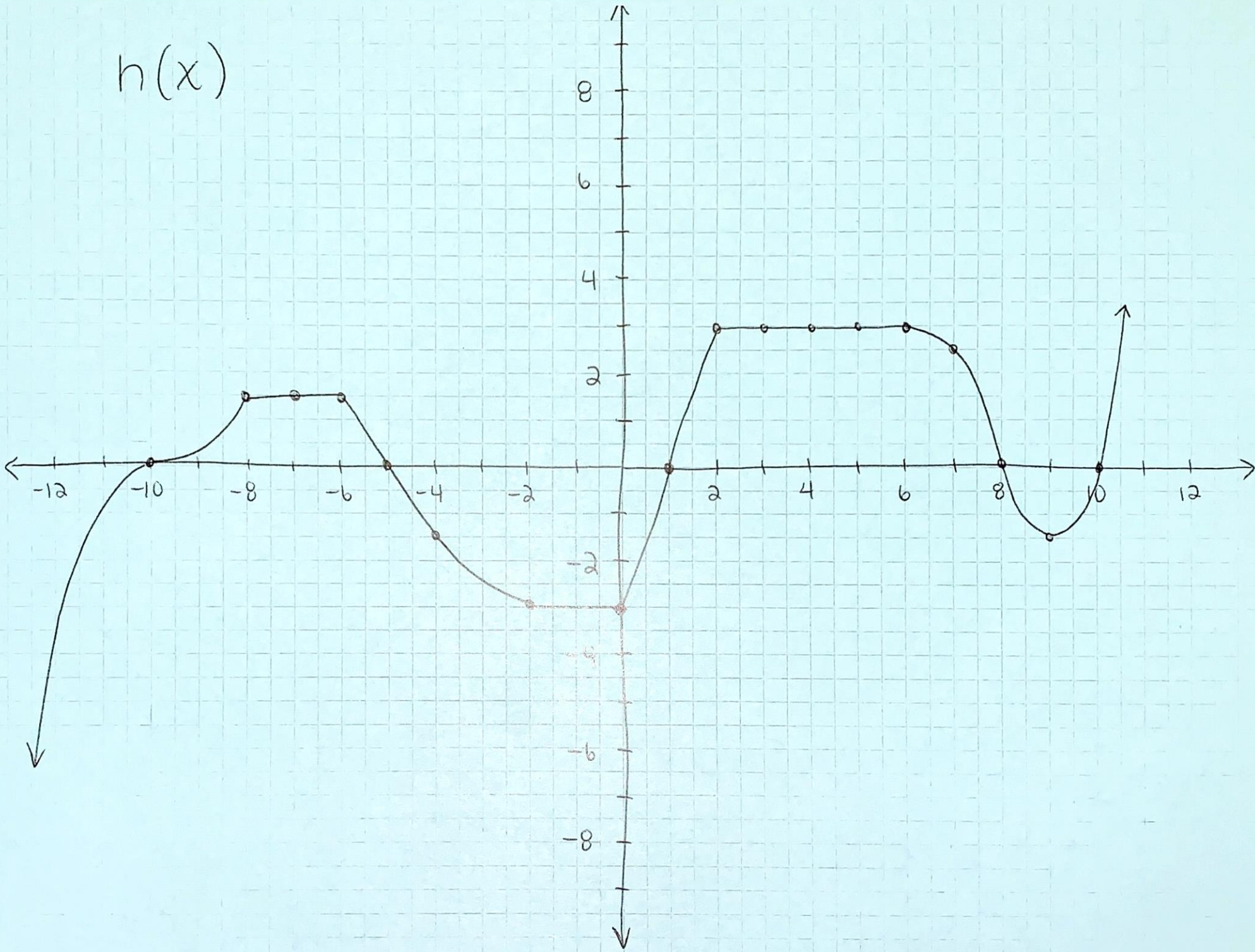
$f(x)$



$g(x)$



$h(x)$



Answers for $f(x)$

{ STATION 1 }

domain: all real numbers or $(-\infty, \infty)$

range: $[-3, 6]$

x-intercepts: $(-2, 0) + (0, 0) + (7, 0)$

y-intercept: $(0, 0)$

increasing intervals: $(-10, -8) \cup (-1, 5)$ ~~$(-1, 5)$~~

decreasing intervals: $(-8, -6) \cup (-3, -1) \cup (5, 9)$

constant intervals: $(-\infty, -10) \cup (-6, -3) \cup (9, \infty)$

local minimum: $(-1, -1)$

local maximum: $(-8, 6) + (5, 6)$

$$f(0) = 0$$

$$f(-8) = 6$$

$$f(5) = 6$$

Answers for $g(x)$

domain: all real numbers or $(-\infty, \infty)$

range: all real numbers or $(-\infty, \infty)$

x-intercepts: $(-4, 0) + (10, 0)$

y-intercepts: $(0, 1)$

increasing intervals: $(-10, -3) \cup (0, 2) \cup (3, 4)$

decreasing intervals: $(-\infty, -10) \cup (2, 3) \cup (4, \infty)$

constant intervals: $(-3, 0)$

local minimum: $(-10, -6) + (3, 3)$

local maximum: $(2, 5) + (4, 5)$

$$f(0) = 1$$

$$f(-8) = -4.5$$

$$f(5) = 3$$

Answers for $h(x)$

domain: all real numbers or $(-\infty, \infty)$

range: all real numbers or $(-\infty, \infty)$

x-intercepts: $(-10, 0) + (-5, 0) + (1, 0) + (8, 0) + (10, 0)$

y-intercepts: $(0, -3)$

increasing intervals: $(-\infty, -8) \cup (0, 2) \cup (9, \infty)$

decreasing intervals: $(-6, -2) \cup (6, 9)$

constant intervals: $(-8, -6) \cup (-2, 0) \cup (2, 6)$

local minimum: $(9, -1.5)$

local maximum: none

$$f(0) = -3$$

$$f(-8) = 1.5$$

$$f(5) = 3$$