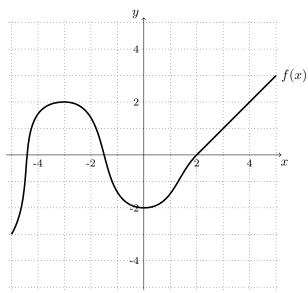
2. [10 points] A portion of the graph of y = f(x) is given below. You do not need to show any work for this problem.



a. [2 points] For which values of x must f(x) be decreasing? Use only the information provided in the graph above, and write your answer in the space provided, using inequalities or interval notation.

f(x) is decreasing on ______[-3,0]

b. [2 points] Let g(x) = f(x+5) - 8. For which values of x must g(x) be decreasing? Use only the information provided in the graph above, and write your answer in the space provided, using inequalities or interval notation.

g(x) is decreasing on ______

c. [4 points] On which of the following intervals is the average rate of change of f(x) the greatest? On which of the following intervals is it the least? Write your answers in the spaces provided. (Note: greatest and least do **not** mean largest and smallest in absolute value.)

[-4, -1.5] [-3, 0] [-4, 4] [2, 4] [-5, 5]

The average rate of change is the greatest on $\underline{\qquad [2,4] \qquad}$, and the least on $\underline{\qquad [-3,0] \qquad}$

d. [2 points] The line y = 7 is a horizontal asymptote for the graph of y = f(x) (note that this is not shown in the graph above). Find the equation(s) of the horizontal asymptote(s) of the graph of y = f(x - 10) + 4 and write your answer(s) in the space provided, or **circle** THE GRAPH HAS NO HORIZONTAL ASYMPTOTES if appropriate.

Horizontal asymptote(s): y = 11

THE GRAPH HAS NO HORIZONTAL ASYMPTOTES