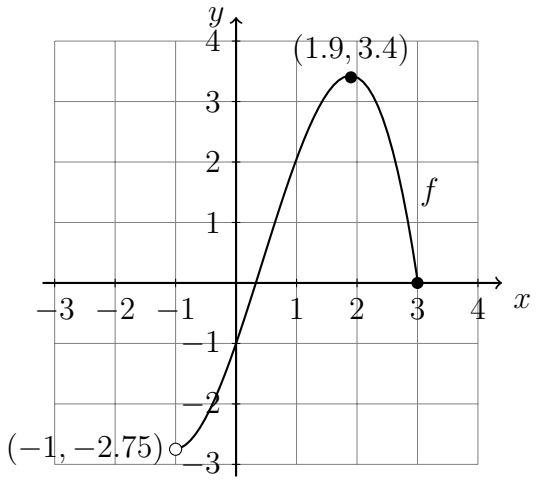
BECA / IB Math 4-Polynomial and rational functions Name:
9 February 2022

4.10 Do Now Quiz: Polynomial and rational functions

1. The graph of a function f is shown on the grid below.



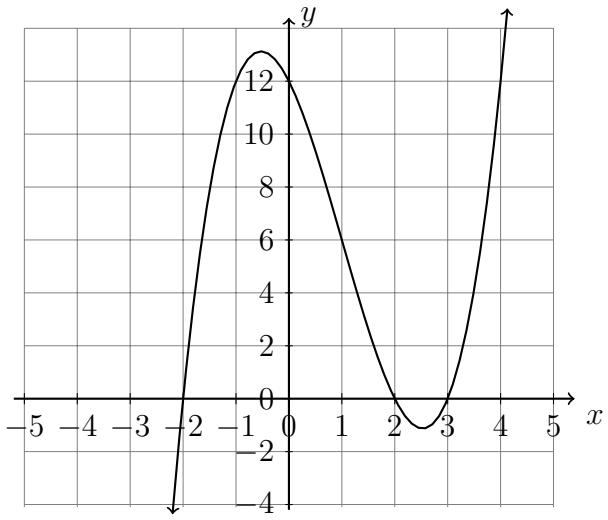
   (a) Write down $f(0)$

   (b) Find x for $f(x) = 2$.

   (c) Write down the domain.

   (d) Write down the range.

2. Part of the function $f(x) = x^3 - 3x^2 - 4x + 12$ is shown on the graph.



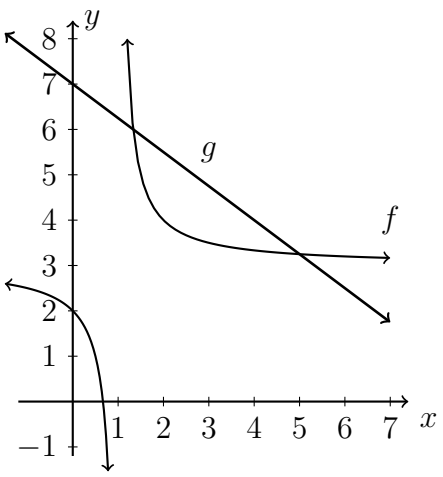
   (a) Write down the y-intercept.

   (b) Write down the x-intercepts.

   (c) Label the local maximum and local minimum as ordered pairs.

   (d) Show that 2 is an x-intercept because $x = 2$ is a solution to $f(x) = 0$.

3. The rational function $f(x) = \dfrac{1}{x-1} + 3$ and the linear function $g(x) = -\dfrac{3}{4}x + 7$ are graphed below.



   (a) Find the solutions to $f(x) = g(x)$.

   (b) Write down the equation of the vertical asymptote to f.

4. Plot the function $h(x) = x^3 - 4x^2 - x + 4$, labeling the $x-$ and y-intercepts. Mark the local maximum and minimums as ordered pairs.