

Name: _____ Period: _____

PC-2 Review

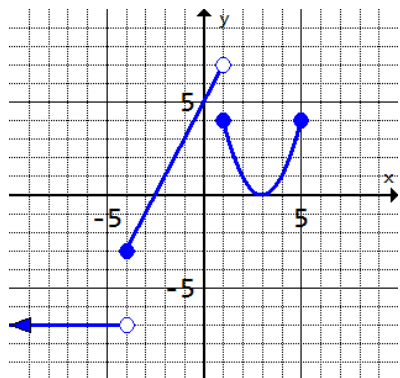
1) Algebraically find the domain of the following functions.

a) $h(x) = \frac{3x}{x^2-16}$

b) $f(x) = \frac{4}{x^2-5x}$

c) $g(x) = \sqrt{9x+7}$

2)



a) Write the definition of the piecewise function $g(x)$ shown.

b) State the interval(s) over which g is increasing/decreasing.

c) State the interval(s) over which g is concave up/down.

3) Use the graph of $g(x)$ to evaluate the following:

d) Evaluate $f(0)$

e) Evaluate $f(-4)$

f) Solve $f(x) = 1$. Write as a set.

g) Find the Domain:

h) Find the Range:

Determine if the function is even, odd, or neither.

4) $G(x) = 1 - x + x^3$

Determine if the function is even, odd, or neither.

5) $f(x) = x^3 - 4x$

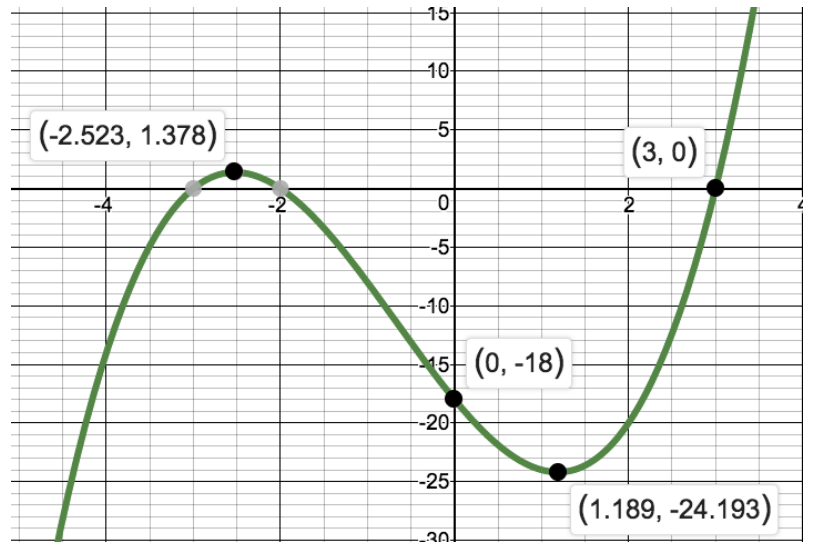
Use the graph to the right to answer the following:

6) Identify the local **extrema**. Indicate if it is a maximum or minimum.

7) Identify intervals for which the graph is increasing/decreasing.

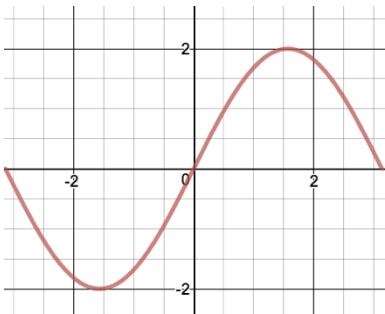
8) Identify intervals for which the graph is concave up/down.

9) Identify all intercepts.



10) Identify the absolute MAX/MIN

11) Determine if the function is even, odd, or neither. Explain your answer.



12) Let $f(x) = 3x^3 + 2x^2$

Evaluate $f(-2)$

13) Let $f(x) = 3x^3 + 2x^2$

Solve $f(x) = 0$

Determine if the following relations are well-defined functions. Explain why or why not.

14. $\{(2, 5), (4, 7), (3, 4), (3, 4)\}$

