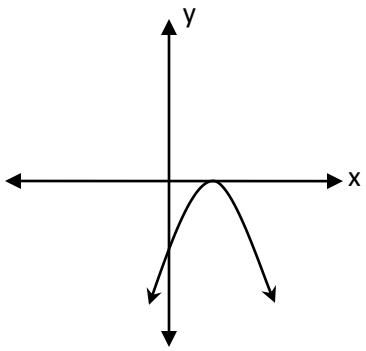
College Review Math Name _____

Section 4-1 & 4-2 Review

Determine whether each graph is a function, then determine the domain and range for each.

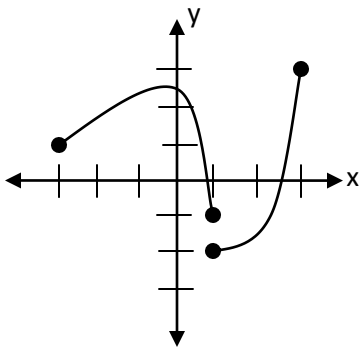
1)



Domain =

Range =

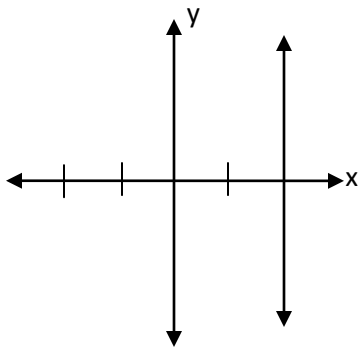
2)



Domain =

Range =

3)



Domain =

Range =

Given a function in equation form, determine the domain and range.

4) $f(x) = -2x^2 - 20x - 37$

Domain =

Range =

5) $f(x) = \dfrac{3x+1}{x^2+11x+30}$

Domain =

Range =

6) $f(x) = \sqrt{2x-22}$

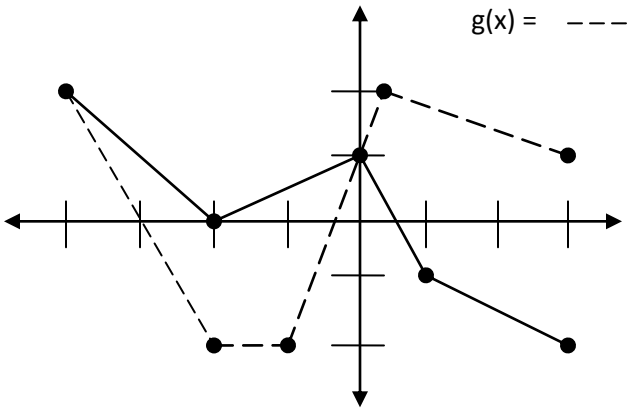
Domain =

Range =

Use the graph below to answer the problems in the text box.

f(x) = ———

g(x) = – – – –



7) f(-4) + g(-4) =

8) For what values of x is f(x) – g(x) negative?

9) What is the maximum value for g(x) – f(x)?

10) g(0) – f(1) + g(-2) =

11) For what values of x does f(x) – g(x) = 0?

For the remaining problems, let $f(x) = x - 1$, $g(x) = 2x^2 + 7$, $h(x) = x^2 + x - 2$

12) $(f + g + h)(x)$

13) $h(-5)$

14) $(f \bullet g)(x)$

15) $h(f(x))$

16) $(g - h)(x)$

17) $\left(\frac{h}{f}\right)(x)$

18) $g(f(h(1)))$

19) $f(g(x))$

20) $h(g(f(-1)))$

21) Define the terms “domain” and “range”.

22) The notation $(f \circ g)(x)$ means the same as _____