Evaluate the Composition of Functions with Graphs   Name_____Key_____
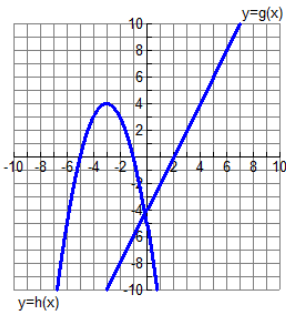
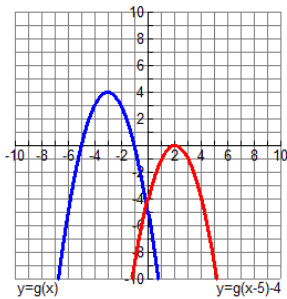**Target 1: I understand how to evaluate composite functions using a graph.**

1. The graphs of $y = g(x)$ and $y = h(x)$ are shown in the graph below. Approximate the value of $g\left(h(-4)\right)$.
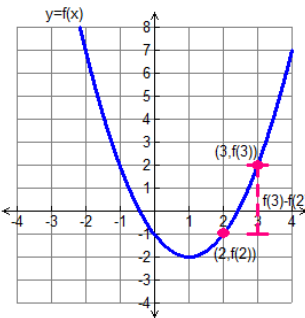

$g(h(-4)) = g(3) = 2$

Target 2: I understand how to sketch graphs of composite functions.

2. The graph of $y = g(x)$ is how in the graph below. Sketch the graph of $y = g(x-5)-4$ on the same grid.

Target 3: I understand the meaning of function expressions as related to the graph.
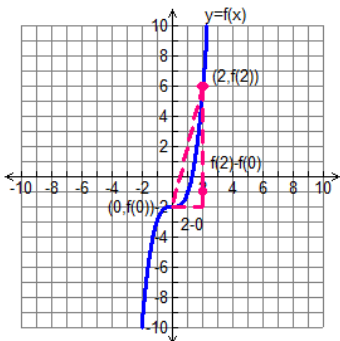
1. Find $f(3)$ and $f(2)$. Illustrate the meaning of $f(3) - f(2)$ on the graph below.

$f(3) = 2,\ f(2) = -1$

$f(3) - f(2) = 3$

2. Illustrate the meaning of $\dfrac{f(2) - f(0)}{3-0}$ on the graph below.

The slope of the secant line between $(0, f(0))$ and $(2, f(2))$:

$$\frac{f(2) - f(0)}{2 - 0} = \frac{6 - (-2)}{2} = 4$$