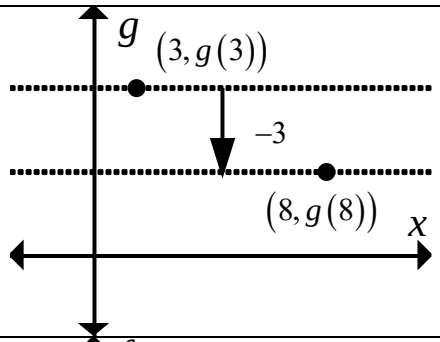
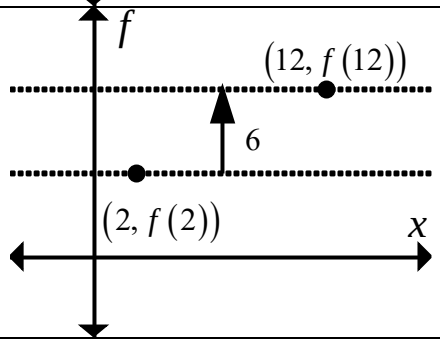
Using Net Change to find the value of a function:

$$\int_a^b f'(x)\,dx = \text{Net Change in } f(x) \text{ from } x=a \text{ to } x=b$$

$\int_3^8 g'(x)\,dx = -3$	
$\int_2^{12} f'(x)\,dx = 6$	

This idea of net change can be used to find the value of a function $f(x)$ at any given x, $x=d$, provided that you are given:

I. A starting point on the function: $(c, f(c))$

II. The derivative of the function: $f'(x)$

$f'(x)=\sin^2(x)$ $f(0)=3$	$f(7)=$
$g'(x)=\ln(x)+\arctan(x)$ $g(1)=-1$	$g(5)=$
$h'(x)=(x+1)e^{-x^2}$ $h(-1)=7$	$h(-5)=$