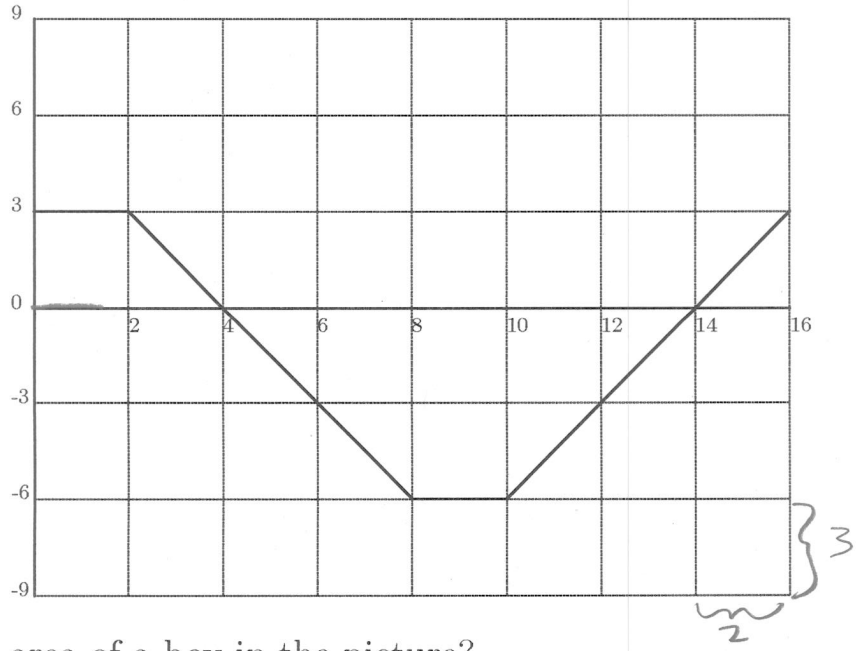
Mathematics 122

Quiz #30 Name: _____

You must show your work to get full credit.

Let $f(x)$ have the graph below.

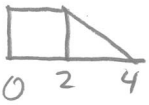


1. What is the area of a box in the picture?

A box has area = $2 \cdot 3 = 6$

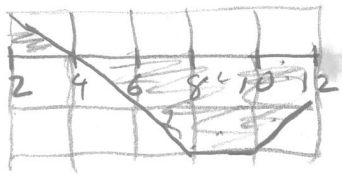
2. Find $\int_0^4 f(x)\,dx$. $\int_0^4 f(x)\,dx =$ 9

$= \text{Area}\left(\right) = (1.5)(\text{boxes}) = 1.5(6) = 9$



3. Find $\int_2^{12} f(x)\,dx$. $\int_2^{12} f(x)\,dx =$ -30

$= \text{Area}\left(\right) = (+.5 - 5.5)\ \text{boxes}$



$= (-5)(\text{boxes})$

$= -5(6) = -30$