

Please read directions carefully. Raise your hand if you are not sure what a problem is asking.

You must explain your work thoroughly and unambiguously to receive full credit on questions or parts of questions designated as **Work and Answer**.

No calculators or notes are allowed on this quiz.

Please note that there is a problem on the back.

**Fill-In.** (8 points) For each function, fill in the general antiderivative. *Don't forget the +C!*

$f(x)$	$F(x)$	$f(x)$	$F(x)$
$8x^7$		$\sin x$	
$\frac{1}{x^2}$		$\sec^2 x$	
$3e^x$		$\sqrt{x}$	

**Graph.** (10 points) For the function  $g(x)$  graphed at right,

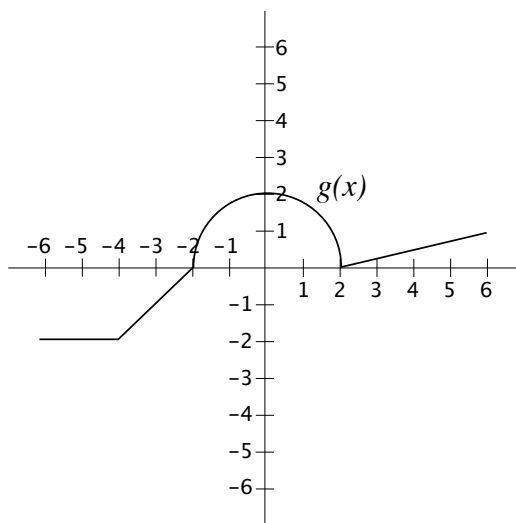
$$\int_{-4}^{-2} g(x) dx = \underline{\hspace{2cm}}$$

$$\int_{-4}^0 g(x) dx = \underline{\hspace{2cm}}$$

$$\int_{-5}^{-4} g(x) dx = \underline{\hspace{2cm}}$$

$$\int_6^2 g(x) dx = \underline{\hspace{2cm}}$$

$$\int_0^2 g(x) dx = \underline{\hspace{2cm}}$$



**Work and Answer.** (6 points) *You must show all relevant work to receive full credit.*

Use geometry to evaluate the integral  $\int_0^4 \sqrt{16 - x^2} dx$ .