Solution

Quiz for January 27, 2009 – 8:00 section

Remove everything from your desk except this page and a pencil or pen.
$\boxed{\text{Circle}}$ your answer. Show your work. Each question is worth 5 points.

1. Solve for x: $\log_{10}(\sqrt{x}) = -1$.

Answer: The given equation is equivalent to $10^{-1} = \sqrt{x}$, which is the same as $\frac{1}{10} = \sqrt{x}$. Square both sides to obtain $\boxed{\dfrac{1}{100} = x}$.

2. Sketch a possible graph for a function f with all of the specified properties.
(i) the domain of f is $[-1, 1]$.
(ii) $f(-1) = f(0) = f(1) = 0$.
(iii) $\lim\limits_{x \to -1^{+}} f(x) = \lim\limits_{x \to 0} f(x) = \lim\limits_{x \to 1^{-}} f(x) = 1$.