

Name:

SOLUTIONS

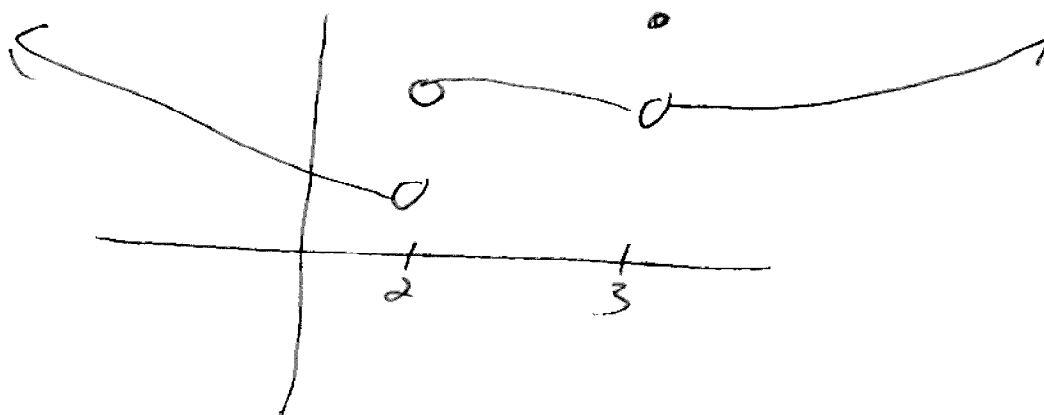
Quiz #4 - September 15, 2006

1. Complete the following definition precisely:

$f(x)$  is continuous at  $x = a$  if ....

$$\lim_{x \rightarrow a} f(x) = f(a)$$

2. Sketch the graph of a function which has a jump discontinuity at  $x = 2$ , a removable discontinuity at  $x = 3$  and is continuous at every other  $x$  value.



3. Find the limit:

$$\lim_{x \rightarrow 4} \frac{2 - \sqrt{x}}{4 - x} = \lim_{x \rightarrow 4} \frac{2 - \sqrt{x}}{(2 - \sqrt{x})(2 + \sqrt{x})}$$

$$= \lim_{x \rightarrow 4} \frac{1}{2 + \sqrt{x}} = \frac{1}{4}$$