

f r q



0	1	2
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The student response includes both of these criteria.

- Answer of  $x = 4.482$  (OR 4.481)
- End behavior with limit notation

**Model Solution**

(i)  $g(x) = 3 \Rightarrow 2 \ln x = 3$

$x = 4.482$  (OR 4.481)

(ii) The function  $g$  is increasing. As  $x$  increases without bound,  $g(x)$  increases without bound. Therefore,  
 $\lim_{x \rightarrow \infty} g(x) = \infty$ .

**Part C**

Select a point value to view scoring criteria, solutions, and/or examples to score the response.



0	1	2
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The student response includes both of these criteria.

- Answer of  $f$  does not have an inverse function
- Reason for no inverse function (Note: reference to “fails the horizontal line test” is not a sufficient reason.)

**Model Solution**

(i)  $f$  does not have an inverse function on its domain of the five real numbers 1, 2, 3, 4, and 5.

(ii) There are output values of  $f$  that are not mapped from unique input values. (The function  $f$  is not one-to-one.)  
 Because  $f(1) = 1$  and  $f(5) = 1$ , the inverse function on this domain does not exist.

A reason that only states “fails the horizontal line test” is not sufficient.