

f r q



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

- Answer of $x = -5.8$
- End behavior with limit notation

Model Solution

(i) $g(x) = -5.8 \Rightarrow \frac{9}{(x-3)} = -5.8$

$x = 1.448$

(ii) As x decreases without bound, the output values of g approach 0. Therefore, $\lim_{x \rightarrow -\infty} g(x) = 0$.

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 is invertible
- Reason for existence of inverse function (Note: reference to “passes the horizontal line test” is not a sufficient reason.)

Model Solution

(i) f is invertible; f has an inverse function on its domain of $x > 2$.

(ii) f is an increasing function. Each output value of f is mapped from a unique input value. There are no repeated $f(x)$ values.

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