

f r q

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 $x = 4.875$
- End behavior with limit notation

Model Solution

$$(i) g(x) = 3 \rightarrow \frac{x^3 - 14x - 27}{x + 2} = 3$$

$$x = 4.875$$

(ii) As x decreases without bound, eventually $g(x)$ increases without bound. Therefore, $\lim_{x \rightarrow -\infty} g(x) = \infty$.

6. Part C

- Use the table of values of $f(x)$ to determine if f is best modeled by a linear, quadratic, exponential, or logarithmic function.
- Give a reason for your answer based on the relationship between the change in the output values of f and the change in the input values of f .

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 quadratic function
- Reason for quadratic function (Note: reference to a quadratic regression is not a sufficient reason.)

Model Solution

(i) f is best modeled by a quadratic function.

(ii) Because the **2nd** differences in the output values are a constant **4** over consecutive equal-length input-value intervals,