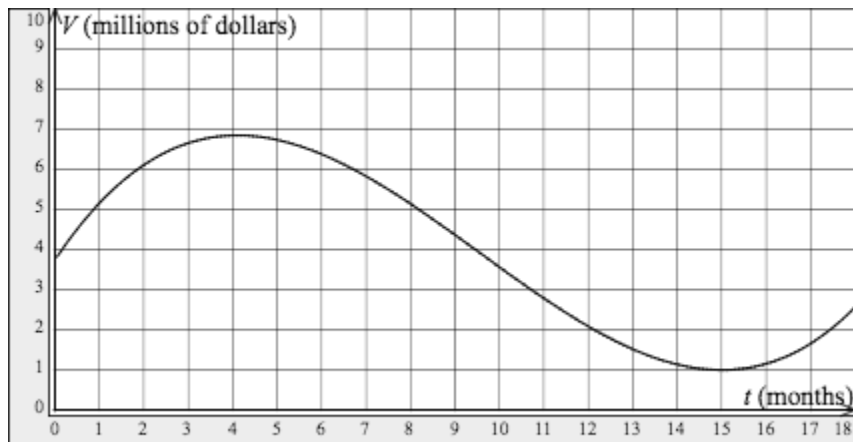


Alg 2 1.2 Homework

Question 1.

The graph shows a function that models the value V (in millions of dollars) of a stock portfolio as a function of time t (in months) over an 18-month period.



Drag and drop each description next to every interval it describes.

$$\{t \mid 0 \leq t \leq 4\}$$

$$\{t \mid 15 \leq t \leq 18\}$$

$$\{t \mid 4 \leq t \leq 15\}$$

Increasing on the interval

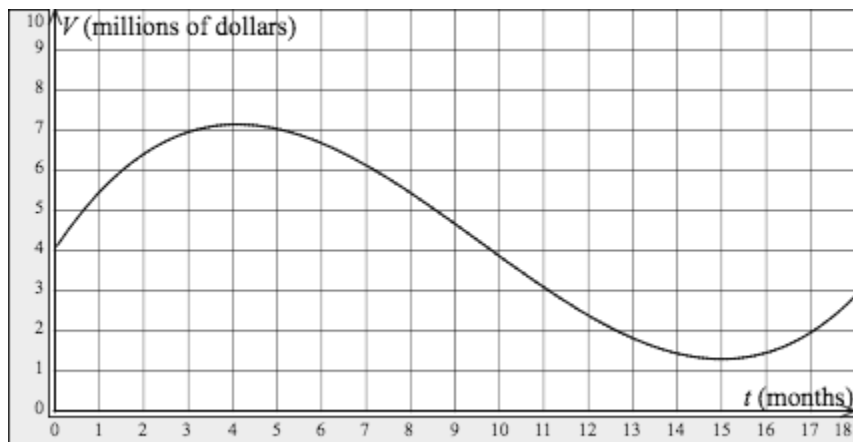
Decreasing on the interval



Alg 2 1.2 Homework

Question 2.

The graph shows a function that models the value V (in millions of dollars) of a stock portfolio as a function of time t (in months) over an 18-month period.



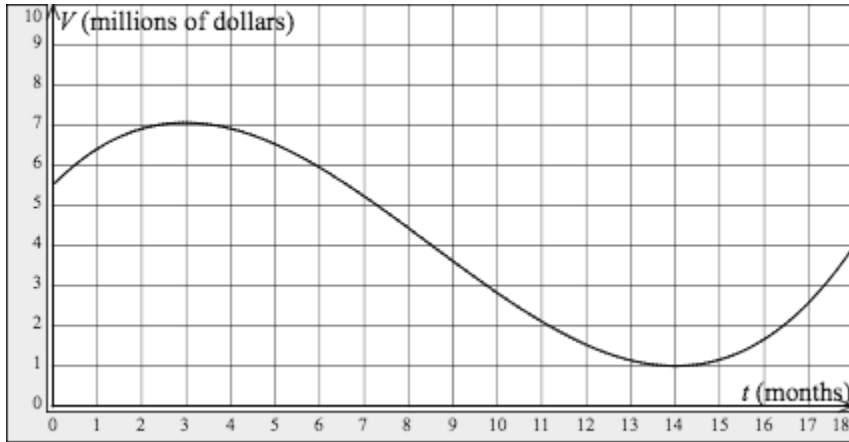
Identify any maximum values and minimum values.

- A.** A maximum value of 2.82 occurs at $t = 18$. A minimum value of 4.09 occurs at $t = 0$.
 - B.** A maximum value of 4.09 occurs at $t = 0$. A minimum value of 2.82 occurs at $t = 18$.
 - C.** A maximum value of 7.13 occurs at $t = 4$. A minimum value of 1.25 occurs at $t = 15$.
 - D.** A maximum value of 7.01 occurs at $t = 5$. A minimum value of 1.39 occurs at $t = 14$.
-

Alg 2 1.2 Homework

Question 3.

The graph shows a function that models the value V (in millions of dollars) of a stock portfolio as a function of time t (in months) over an 18-month period.



What are the function's domain and range? Round values to the nearest whole number.

The function's domain is $\{t \mid \boxed{} \leq t \leq \boxed{}\}$.

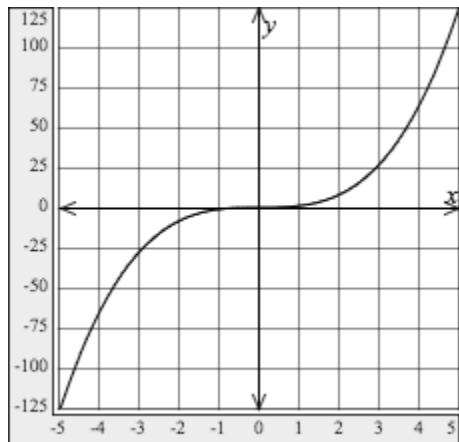
The range is $\{V \mid \boxed{} \leq V \leq \boxed{}\}$.

Alg 2 1.2 Homework

Question 4.

Part 1

The graph of the cubic function $f(x) = x^3$ is shown.



What are the domain, range, and end behavior of the function?

Select the domain and the range of the function as an inequality, using set notation, and using interval notation.

Domain:

Inequality: (select) Set notation: $\{x \mid$ (select) $\}$ Interval notation:
(select)

Range:

Inequality: (select) Set notation: $\{y \mid$ (select) $\}$ Interval notation:
(select)

End behavior: As $x \rightarrow +\infty$, $f(x) \rightarrow$ (select) As $x \rightarrow -\infty$, $f(x) \rightarrow$ (select)

Part 2

How is the range of the function affected if the domain is restricted to $[-2, 2]$? Select the range of the function as an inequality, using set notation, and using interval notation.

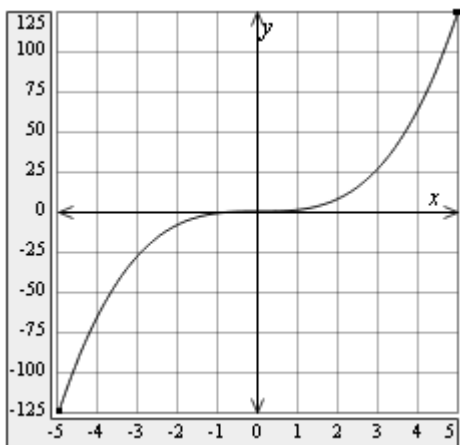
Range:

Inequality: (select) Set notation: $\{y \mid$ (select) $\}$ Interval notation:
(select)

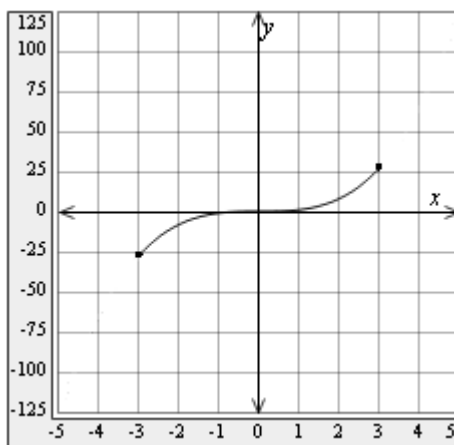
Part 3

Select the graph of the function with the restricted domain.

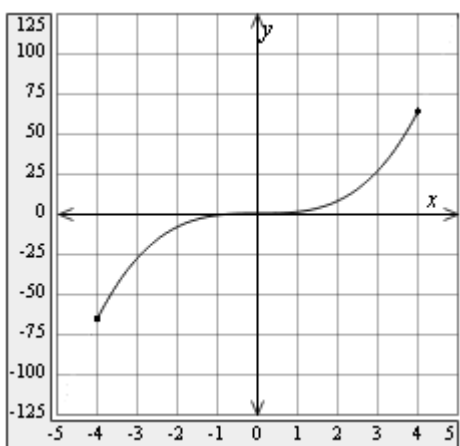
A.



B.



C.



D.

