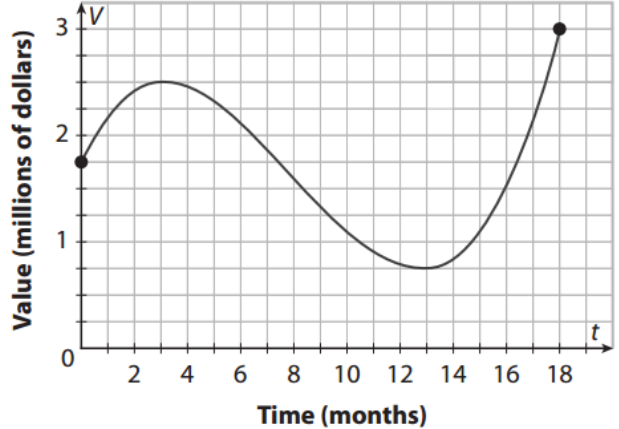**The graph shows a function that models the value V (in millions of dollars) of a stock portfolio as a function of time t (in months) over an 18-month period.**

1. On what interval is the function decreasing?

    On what intervals is the function increasing?

2. Identify any maximum values and minimum values.

3. What are the function's domain and range?

The table of values gives the probability P(n) for getting all 5's when rolling a number cube n times.

4. Is P(n) increasing or decreasing? Explain the significance of this.

n	1	2	3	4	5
P(n)	$\frac{1}{6}$	$\frac{1}{36}$	$\frac{1}{216}$	$\frac{1}{1296}$	$\frac{1}{7776}$

5. What is the end behavior of P(n)? Explain the significance of this.

6. The table shows some values of a function. On which intervals is the function's average rate of change positive? Select all that apply.
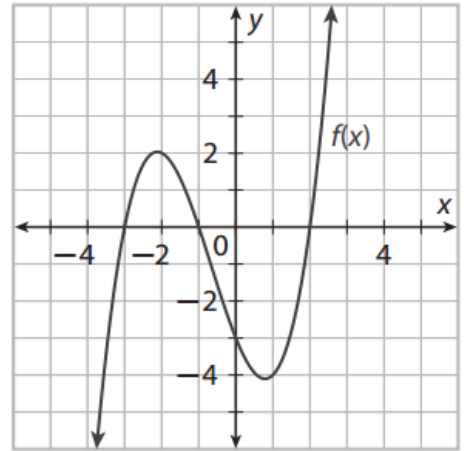
x	0	1	2	3
f(x)	50	75	40	65

a. From x = 0 to x = 1   b. From x = 0 to x = 2   c. From x = 0 to x = 3

d. From x = 1 to x = 2   e. From x = 1 to x = 3   f. From x = 2 to x = 3

Use the graph of the function f(x) to identify the function's specified attributes.

7. Find the function's average rate of change over each interval.

a. From x = -3 to x = -2   b. From x = -2 to x = 1

8. On what intervals are the function's values positive?

9. On what intervals are the function's values negative?

10. What are the zeros of the function?

11. The following describes the United States nuclear stockpile from 1944 to 1974. From 1944 to 1958, there was a gradual increase in the number of warheads from 0 to about 5000. From 1958 to 1966, there was a rapid increase in the number of warheads to a maximum of about 32,000. From 1966 to 1970, there was a decrease in the number of warheads to about 26,000. Finally, from 1970 to 1974, there was a small increase to about 28,000 warheads. Sketch a graph of the function.