

Which of these statements correctly describes the function $h(x) = 4x^2 - 4$?

- A. The function $h(x)$ is even.
- B. The function $h(x)$ is odd.
- C. The function $h(x)$ is both even and odd.
- D. The function $h(x)$ is neither even nor odd.

Which of the following functions has a graph that shows a parabola that opens downward?

- A. $f(x) = -5(x - 2)$
- B. $h(x) = (x + 6)^2 - 7$
- C. $m(x) = \frac{1}{2}(x - 1)^2 + \frac{1}{4}$
- D. $p(x) = -2(x + 3)^2 + 5$

8. Which of the following shows a quadratic expression and its factored form?

- A. $4x^2 - 3x^2 + 1; 4(x - 3)(x + 1)$
- B. $5x^2 - 10x - 15; 5(x - 1)(x + 3)$
- C. $-3x^2 - 2x - 8; -3(x - 4)(x + 2)$
- D. $-2x^2 + 18; -2(x - 3)(x + 3)$

9. A small museum uses the function $V(x) = -(x - 8)^2 + 64$ to model the number of visitors who are present x hours after the museum opens. For which interval of x does the function make sense?

- A. $(0, 8)$
- B. $(0, 16)$
- C. $(0, 64)$
- D. $(0, 128)$

Several input- and output- values of the quadratic function $f(x)$ on the interval $[0, 8]$ are recorded below.

x	0	1	2	3	4	5	6	7	8
f(x)	7	8	11	16	23	32	43	56	71

During which of the following subintervals was the rate of change of $f(x)$ equal to the average rate of change of $f(x)$ on the interval $[0, 8]$?

- A. $[1, 8]$
- B. $[2, 6]$
- C. $[3, 7]$
- D. $[4, 5]$