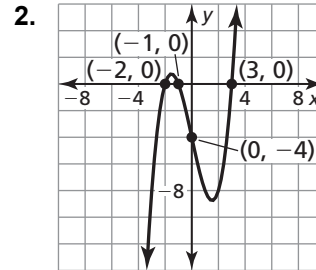
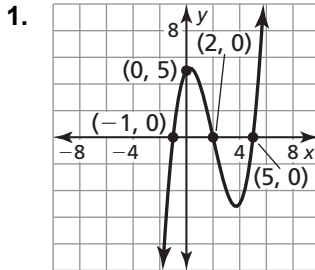


3.9 Practice B

In Exercises 1 and 2, write a cubic function whose graph is shown.



In Exercises 3–5, use finite differences to determine the degree of the polynomial function that fits the data. Then use technology to find the polynomial function.

3.

x	1	2	3	4	5	6
$f(x)$	-10	-14	-13	-7	4	20

4.

x	1	2	3	4	5	6	7	8
$f(x)$	24	12	6	9	24	54	102	171

5.

x	1	2	3	4	5	6	7
$f(x)$	20	4	0	4	16	40	84

6. The data in the table show the wave height (in inches) over a 7-second period.

x	1	2	3	4	5	6	7
$f(x)$	0.5	3	6.5	12	20.5	33	50.5

- Find a polynomial model for the data.
- Does this model seem reasonable for the next 7-second interval? Explain.