

**LESSON**  
**6-9**

**Practice B**  
*Curve Fitting with Polynomial Models*

Use finite differences to determine the degree of the polynomial that best describes the data.

1. \_\_\_\_\_

$x$	$y$
0	4
1	14
2	24
3	30
4	30
5	24

2. \_\_\_\_\_

$x$	$y$
-2	70
-1	35
0	15
1	7
2	8
3	15

3. \_\_\_\_\_

$x$	$y$
2	1
1	7
0	12
-1	16
-2	19
-3	21

4. \_\_\_\_\_

$x$	$y$
-6	-31
-5	0
-4	16
-3	19
-2	11
-1	-6

**Solve.**

5. The data set shows the average price for a luxury commodity for the years since 1998.

Year	1998	1999	2000	2001	2002	2003	2004	2005
Price (\$)	1000	2027	4472	7507	10,472	12,875	14,392	14,867

a. Write a polynomial function for the data.

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b. Predict the price of the item in 2008.

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