

▶ Extending Concepts



Business Data from real-world applications rarely match a linear, exponential, or quadratic model perfectly. In Exercises 19–22, the table shows data from a business application. Determine whether a linear, exponential, or quadratic model *best* represents the data in the table. Explain your reasoning.



19. The table shows the revenue for selling various units.

Units sold	0	40	80	120	160	200
Revenue	\$0	\$186.30	\$372.45	\$558.38	\$744.24	\$930.15

20. The table shows the total cost for producing various units.

Units produced	0	40	80	120	160	200
Total cost	\$500.00	\$572.05	\$627.98	\$668.03	\$692.10	\$700.12

21. The table shows the profit from selling various units.

Units sold	0	40	80	120	160	200
Profit	−\$500.00	−\$385.75	−\$255.53	−\$109.65	\$52.14	\$230.03

22. The table shows the stock price of a company for various years.

Year	2007	2008	2009	2010	2011	2012
Stock price	\$21.56	\$23.68	\$26.08	\$28.62	\$31.62	\$34.79

Activity Fold a rectangular piece of paper in half. Open the paper and record the number of folds and the number of sections created. Repeat this process four times and increase the number of folds by one each time. In Exercises 23–26, use your results.

23. Complete the table.

Folds	1	2	3	4	5
Sections					



2 folds
4 sections

24. Graph the data in Exercise 23. Determine whether the pattern is linear, exponential, or quadratic.
25. Write a formula for the model that represents the data.
26. How many sections are created after eight folds?