

## ▶ Extending Concepts



**Creating a Price Index** In Exercises 19–22, use the information below and the table.

To create a price index, first choose a base year. The index in that year is 100. The price index reflects the ratio of the price from a given year to the price in the base year. Use the formula

$$\text{Index in year A} = 100 \times \frac{\text{Price in year A}}{\text{Price in base year}}$$

to find the index for a given year A.

- 19. Complete the table.
- 20. Make a double line graph of the gasoline index and the diesel index. Compare the rate of inflation for gasoline to the rate of inflation for diesel fuel.

Year	Unleaded Regular Gasoline		Diesel Fuel	
	Average Price Per Gallon	Gasoline Index	Average Price Per Gallon	Diesel Index
1995	\$1.15	100.0	\$1.11	100.0
1996	\$1.23	107.0	\$1.24	
1997	\$1.23		\$1.20	
1998	\$1.06		\$1.04	
1999	\$1.17		\$1.12	
2000	\$1.51		\$1.49	
2001	\$1.46		\$1.40	
2002	\$1.36		\$1.32	
2003	\$1.59		\$1.51	
2004	\$1.88		\$1.81	
2005	\$2.30		\$2.40	
2006	\$2.59		\$2.71	
2007	\$2.80		\$2.89	
2008	\$3.27		\$3.80	
2009	\$2.35		\$2.47	



- 21. For the years shown, use a spreadsheet to compare the rates of inflation for gasoline and diesel fuel to the rate of inflation indicated by the CPI.
- 22. Diesel engines are 30% more fuel efficient than similar-sized gasoline engines. From 2005 through 2009, would the annual fuel cost be more for a diesel engine or a similar-sized gasoline engine? Explain your reasoning.
- 23. **Inflation Rate** Why might the inflation rate published by the Bureau of Labor Statistics not match an individual’s inflation experience?
- 24. **Economy** Discuss the effects of inflation on an economy. Explain your reasoning.