

Comparing Costs

This worksheet provides additional questions for the Science and Math Link on page 162. Use the data in the table to complete the problems.

Typical EnerGuide Ratings for Major Appliances (kWh/year)				
Type of Appliance	1984	1990	1997	2002
Dishwashers	1213	1026	649	592
Freezers	813	714	376	368
Self-cleaning ovens	790	727	759	735



- 1. a)** The price of electric energy is 8.5¢/kWh. How much would it cost to use a self-cleaning oven produced in 2002 for one year?
HINT: Find the EnerGuide rating in the table above.

STEP 1: Write down what you know.

EnerGuide rating = _____

Price of energy = _____

\$1 = 100¢

What formula will you use?

STEP 2: What do you want to find out?

STEP 3: Multiply the energy consumed by the price of energy.

Total cost for one year = _____ × _____ = _____

Change the ¢ to \$ = _____ ÷ _____ = _____



- 1. b)** The average lifespan of an oven is 18 years. What is the cost of using the oven over its lifespan?

STEP 4: Multiply the yearly cost by the lifespan of the appliance.

Cost over lifespan = _____ × _____

= _____

Name: _____

Date: _____

BLM 8-1
(continued)



2. a) The price of electric energy is 11.0¢/kWh. How much would it cost to use a freezer produced in 1984 for one year?



2. b) The average lifespan of a freezer is 21 years. What is the cost of using the 1984 freezer over its lifespan?



2. c) How much would it cost to use a freezer produced in 2002 for one year?



2. d) What is the cost of using the 2002 freezer over its lifespan?

Name: _____

Date: _____

BLM 8-1
(continued)



3. a) The price of electric energy is 9.0¢/kWh. How much would it cost to use a dishwasher produced in 1990 for one year?



3. b) The average lifespan of a dishwasher is 13 years. What is the cost of using the 1990 dishwasher over its lifespan?



3. c) How much would it cost to use a dishwasher produced in 1997 for one year?



3. d) What is the cost of using the 1997 dishwasher over its lifespan?