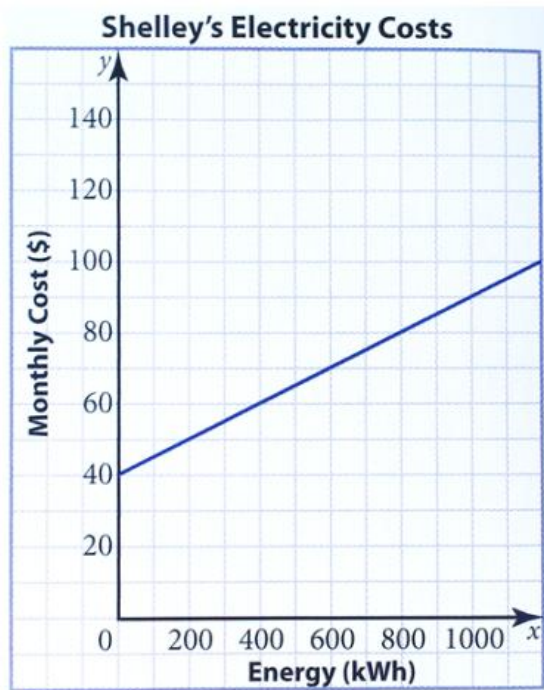# Linear Models

Shelley's Electricity Costs

1. What is the independent variable in this situation?

2. What is the dependent variable in this situation?

3. What is the relationship between monthly cost and energy consumed?

4. Estimate the cost of 200 kWh.

5. How does the cost change each time the consumption goes up by 100 kWh?

6. What are suitable units for the rate of change of this relationship?

7. What is the rate of change for this situation?

Time (h)	Fuel Remaining (gal)
0.00	19.50
0.25	18.70
0.50	17.90
0.75	17.10
1.00	16.30
1.25	15.40
1.50	14.60
1.75	13.80
2.00	13.00
2.25	12.20
2.50	11.40
2.75	10.60
3.00	9.80

1. Draw a graph, with the independent variable on the horizontal axis and dependent variable on the vertical axis.

2. What are suitable units for the rate of change of this situation?

3. What is the rate of change of this situation?

4. How long before the tank of fuel runs out?