

1-8 Study Guide

Graphs and Functions

Draw Graphs You can represent the graph of a function using a **coordinate system**. Input and output values are represented on the graph using **ordered pairs** of the form (x, y) . The x -value, called the **x -coordinate**, corresponds to the x -axis, and the y -value, or **y -coordinate** corresponds to the y -axis. Graphs can be used to represent many real-world situations.

Example

A music store advertises that if you buy 3 CDs at the regular price of \$16, then you will receive one CD of the same or lesser value free.

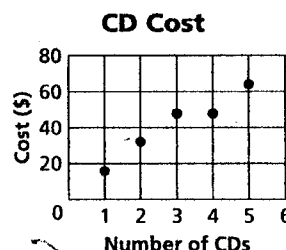
- a. Make a table showing the cost of buying 1 to 5 CDs.

Number of CDs	1	2	3	4	5
Total Cost (\$)	16	32	48	48	64

- b. Write the data as a set of ordered pairs.

$(1, 16), (2, 32), (3, 48), (4, 48), (5, 64)$

- c. Draw a graph that shows the relationship between the number of CDs and the total cost.



LOOK

PAGE 1 $\Rightarrow$ WORK ON THIS PAGE

Exercises

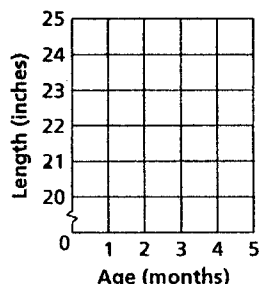
PAGE 2 $\Rightarrow$ ALL WORK ON LOOSELEAF!

LOOK

1. The table below represents the length of a baby versus its age in months.

Age (months)	0	1	2	3	4
Length (inches)	20	21	23	23	24

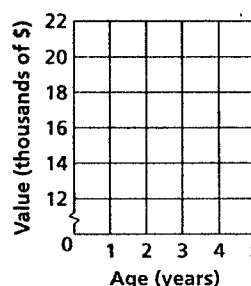
- Identify the independent and dependent variables.
- Write a set of ordered pairs representing the data in the table.
- Draw a graph showing the relationship between age and inches.



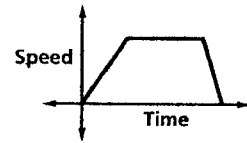
2. The table below represents the value of a car versus its age.

Age (years)	0	1	2	3	4
Value (\$)	20,000	18,000	16,000	14,000	13,000

- Identify the independent and dependent variables.
- Write a set of ordered pairs representing the data in the table.
- Draw a graph showing the relationship between age and value.

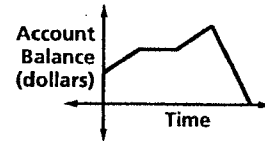


- ③ The graph represents the speed of a car as it travels to the grocery store. Identify the independent and dependent variable. Then describe what is happening in the graph.



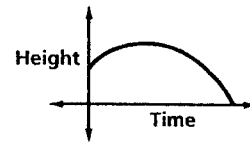
* USE LOOSELEAF

- ④ The graph represents the balance of a savings account over time. Identify the independent and the dependent variable. Then describe what is happening in the graph.



* USE LOOSELEAF

- ⑤ The graph represents the height of a baseball after it is hit. Identify the independent and the dependent variable. Then describe what is happening in the graph.



* USE LOOSELEAF

* USE LOOSELEAF FOR ALL OF THE PROBLEMS ON Pg 2

EVALUATE:

⑥ $\frac{1}{7} \cdot \frac{4}{5}$ ⑦ $\frac{2}{3} \div \frac{9}{8}$ ⑧ $\frac{7}{3} \div \frac{1}{5}$ ⑨ $6 \div \frac{4}{9}$

⑩ $\frac{\frac{2}{3}}{\frac{8}{7}}$ ⑪ $\frac{\frac{7}{8}}{\frac{2}{9}}$ ⑫ $\frac{\frac{1}{2}}{2}$ ⑬ $\frac{7}{8} \div \frac{4}{8}$

⑭ $|-8|$ ⑮ $||7|$ ⑯ $8 + |-3|$ ⑰ $3 - |2|$

Simplify:

⑱ $2x + \frac{1}{3}(15x + 9)$ ⑲ $4(\frac{2}{3}x)$ ⑳ $4 + 3|x| + 12$