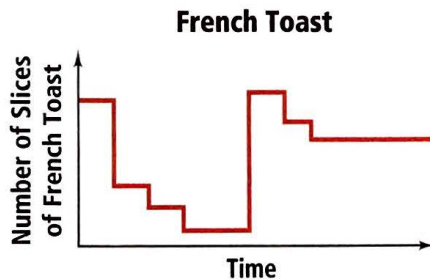


Do you know **HOW?**

1. **Buffet** The graph shows the number of slices of French toast in a serving dish at a breakfast buffet as time passes. What are the variables? Describe how the variables are related at various points on the graph.



Sketch a graph of the height of each object over time. Label each section.

2. **Recreation** You throw a flying disc into the air. It hits a tree branch on its way up and comes to rest on a roof. It stays on the roof for a minute before the wind blows it back to the ground.
3. **Elevator** An elevator fills with people on the ground floor. Most get off at the seventh floor, and the remainder get off at the ninth floor. Then two people get on at the tenth floor and are carried back to the ground floor without any more stops.

For each table, identify the independent and dependent variables. Then describe the relationship using words, an equation, and a graph.

4. Ounces of Soda

Number of Cans	Soda (oz)
1	12
2	24
3	36
4	48

5. Dog Biscuits Left

Number of Tricks	Number of Biscuits
1	20
2	17
3	14
4	11

Tell whether the function shown by each table is *linear* or *nonlinear*.

6.

x	1	2	3	4
y	6	8	10	12

7.

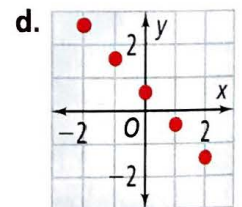
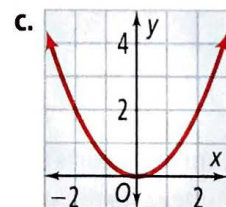
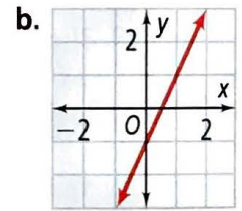
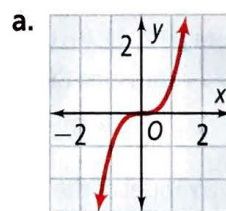
x	0	2	4	6
y	5	5	5	5

8.

x	0	1	2	3
y	-3	-4	-5	6

Do you **UNDERSTAND?**

9. **Vocabulary** Does each graph represent a *linear* function or a *nonlinear* function? Explain.



10. **Writing** The size of a bees' nest increases as time passes. Your friend says that time is the dependent variable because size depends on time. Is your friend correct? Explain.
11. **Open-Ended** With some functions, the value of the dependent variable decreases as the value of the independent variable increases. What is a real-world example of this?