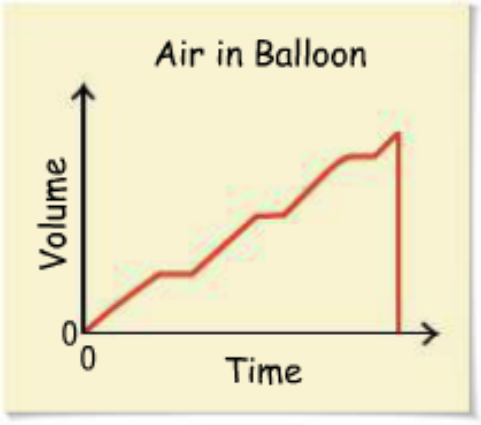
Lesson 4-1: Using Graphs to Relate Two Quantities

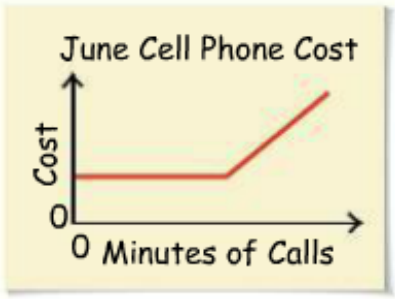
1. The graph shows the volume of air in a balloon as you blow it up, until it pops.



   a. What are the variables?

   b. Describe how the variables are related at various points on the graph.

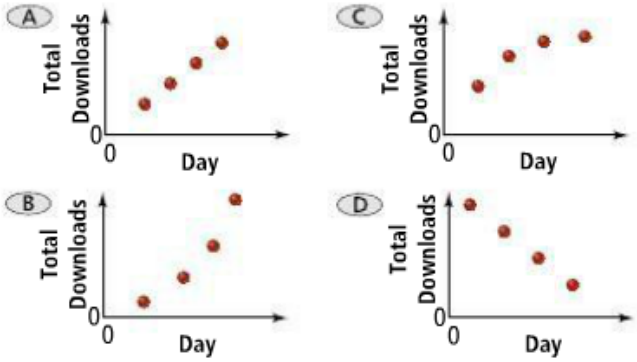
Got It? Repeat for this graph:



2. A band allowed fans to download its new video from its web site. The table shows the total number of downloads after 1, 2, 3, and 4 days. Which graph could represent the data shown in the table?

Video Downloads

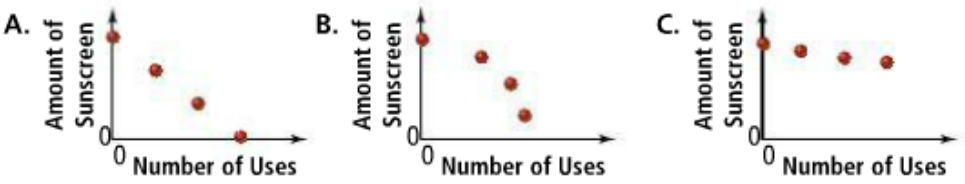
Day	Total Downloads
1	346
2	1011
3	3455
4	10,426



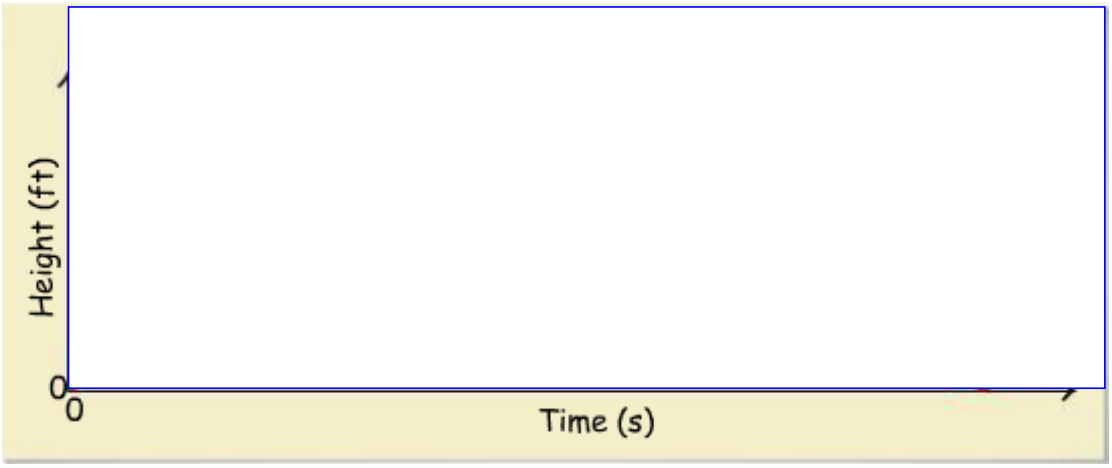
Got It? Try this one:

The table shows the amount of sunscreen left in a can based on the number of times the sunscreen has been used. Which graph could represent the data shown in the table?

Sunscreen				
Number of Uses	0	1	2	3
Amount of Sunscreen (oz)	5	4.8	4.6	4.4



3. A model rocket rises quickly and then slows to a stop as its fuel burns out. It begins to fall quickly until the parachute opens, after which it falls slowly back to Earth. Sketch a graph that could represent the height of the rocket during its flight, and label each section of the graph.



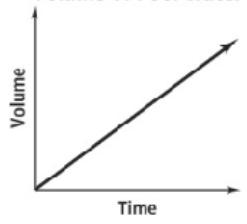
4-1 Practice

Form G

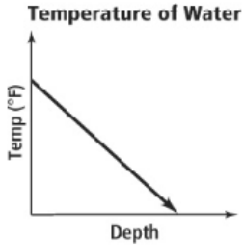
Using Graphs to Relate Two Quantities

What are the variables in each graph? Describe how the variables are related at various points on the graph.

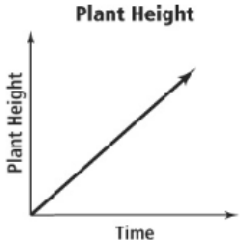
1.



2.

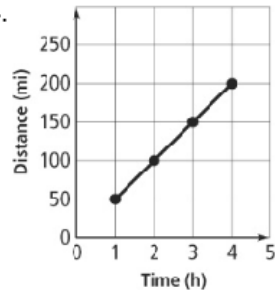


3.

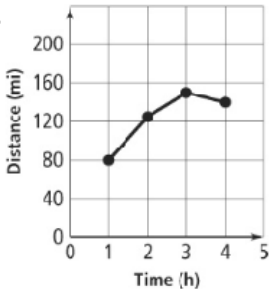


Match each graph with its related table. Explain your answers.

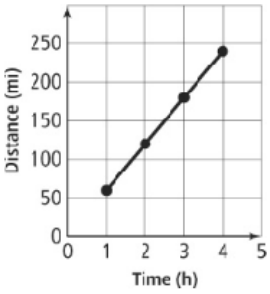
4.



5.



6.



A.

Time (h)	Distance (mi)
1	60
2	120
3	180
4	240

B.

Time (h)	Distance (mi)
1	80
2	125
3	150
4	140

C.

Time (h)	Distance (mi)
1	50
2	100
3	150
4	200

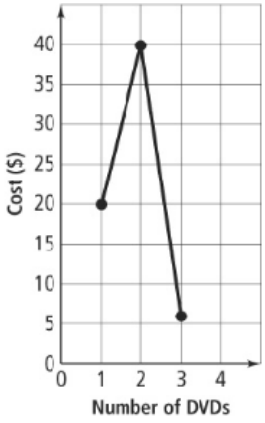
Sketch a graph to represent the situation. Label each section.

7. You buy two shirts. The third one is free.

8. You warm up for gym class, play basketball, and then cool down.

9. The temperature warms up during the day and then decreases at night.

10. Error Analysis DVDs cost \$19.99 each for the first 2 purchased. After that, they cost \$5.99 each. Describe and correct the error in sketching a graph to represent the relationship between the total cost and the number of DVDs purchased.



11. Sketch a graph of each situation. Are the graphs the same? Explain.

a. your distance from school as you leave your house and walk to school

b. your distance from school as you leave school and walk to your house