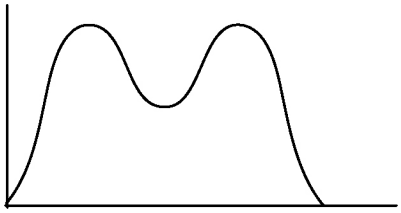
Name: _____ Date: _____

BLM 3–13

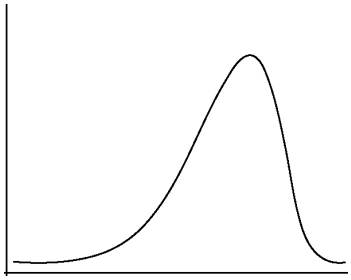
Section 3.6 Common Distributions

1. Classify each distribution as normal, skewed, or bimodal.

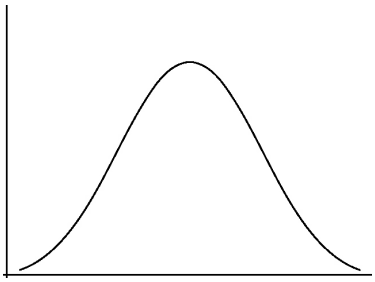
a)



b)



c)



2. Give an example of a set of data that would match each distribution in question 1. Explain why the example chosen would follow the distribution.

3. What can cause a skewed distribution? Give an example.

4. What type of distribution would you expect from the data in each scenario? Explain.

a) salaries of employees in a large company

b) heights of professional basketball players in the men's and women's leagues

c) the lifespan of a large sample of fluorescent light bulbs

d) gas efficiency of passenger cars

5. The scores on a difficult mathematics test in the final year of a college business program are shown in the table.

Interval	Frequency
under 30	11
[30, 40)	26
[40, 50)	38
[50, 60)	21
[60, 70)	14
[70, 80)	3
[80, 90)	1
[90, 100)	0

a) Display the data using a histogram.

b) What type of distribution does the graph represent?

c) The program organizer has decided to "bell curve" the results for a median score of 60 to 70. This means shifting the data to a normal distribution. Explain how this could be done.

6. The volume of paint in a 1-L can is normally distributed at 974 mL with a standard deviation of 3.5 mL. Sketch a graph of a distribution that would represent 100 cans of paint. Describe the graph.

7. Refer to question 6. The machine malfunctions and only dispenses 474 mL of paint per can for the next 100 cans.

a) How will this change the distribution?

b) What type of distribution would represent the 100 cans of paint?

c) Sketch a graph of the new distribution on the graph you made in question 6.

d) What type of distribution does the whole graph represent?