

Name _____

Date _____

Graphing Probability Distribution - Guided Lesson

Complete the following problems:

1) Draw a relative frequency histogram of the data. Comment on the shape of the distribution.

Waist Size	Relative frequency
39.0-39.9	0.007
40.0-40.9	0.007
41.0-41.9	0.007
42.0-42.9	0.027
43.0-43.9	0.04
44.0-44.9	0.057
45.0-45.9	0.077
46.0-46.9	0.012
47.0-47.9	0.117
48.0-48.9	0.17
49.0-49.9	0.14
50.0-50.9	0.13
51.0-51.9	0.13
52.0-52.9	0.08
53.0-53.9	0.037
54.0-54.9	0.027
55.0-55.9	0.027
56.0-56.9	0.007
57.0-57.9	0.007



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2) Draw a relative frequency histogram of the data. Comment on the shape of the distribution.

Age (years)	Relative frequency
19.0-19.9	0.006
20.0-20.9	0.031
21.0-21.9	0.006
22.0-22.9	0.026
23.0-23.9	0.028
24.0-24.9	0.056
25.0-25.9	0.076
26.0-26.9	0.011
27.0-27.9	0.116
28.0-28.9	0.16
29.0-29.9	0.13
30.0-30.9	0.12
31.0-31.9	0.12
32.0-32.9	0.07
33.0-33.9	0.036
34.0-34.9	0.026
35.0-35.9	0.026
36.0-36.9	0.006
37.0-37.9	0.006

3) Draw a normal curve with $\mu = 28.5$ inches $\sigma = 4.12$ inches on the relative frequency histogram.

Use the graph from #2 as a reference. Compare the area of the rectangle for ages between 30 and 30.9 inches old to the area under the normal curve for ages between 30 and 30.9 years old.

Mean = 28.5

Standard dev = 4.12

