Math 153 - Quiz 3

Name __key__

September 8, 2016

Score _____

Show all work to receive full credit. Supply explanations when necessary.

1. (7 points) The following frequency distribution shows the costs (in dollars) of 30 portable GPS navigators.

GPS Costs ($)	Frequency
65–104	6
105–144	9
145–184	6
185–224	4
225–264	2
265–304	1
305–344	2

(a) What are the class boundaries associated with the first class listed above?

$$64.5 \ \& \ 104.5$$

(b) What is the class width?

$$105 - 65 = 40$$

(c) If the frequency distribution was changed to a relative frequency distribution, what number would be associated with the class "145–184"?

$$\frac{6}{30} \quad \text{or} \quad 20\%$$

(d) If the frequency distribution was changed to a cumulative frequency distribution, what number would be associated with the class "≤ 224"?

$$6 + 9 + 6 + 4 = 25$$

(e) What are the class midpoints?

$$\frac{65 + 104}{2} = 84.5, \ 124.5, \ 164.5, \ \ldots, \ 324.5$$

(f) Do the costs appear to be normally distributed? If so, explain why you think so. If not, describe the type of distribution.

No, THE DISTRIBUTION IS SKEWED RIGHT.

2. (3 points) Using class boundaries to separate the horizontal axis, sketch the histogram associated with the frequency distribution above. Label your axes. (If you need more space, use the back.)