Section 2.3: Measures of spread

1. Match each standard deviation with one of the following histograms:
   (a) $s = 0.5$  (b) $s = 10$  (c) $s = 50$  (d) $s = 1$  (e) $s = 1000$  (f) $s = 0.29$

2. Match each five number summary with one of the above histograms:
   (a) $(0, 0.25, 0.5, 0.75, 1)$  (b) $(-1.08, -0.30, 0.01, 0.35, 1.27)$  (c) $(0.64, 27.25, 53.16, 100, 275.7)$
   (d) $(-3.5, -0.63, -0.11, 0.59, 2.66)$  (e) $(71.45, 92.77, 99.41, 106.60, 129.70)$  (f) $(-1296, -1005, -705, 998, 1312)$

3. Estimate the five number summary from the following plot. Also estimate the 10th and 90 percentiles.

4. Indicate whether the five number summary corresponds most likely to a distribution which is skewed to the left, skewed to the right, or symmetric.
   (a) $(15, 25, 30, 35, 45)$
   (b) $(0, 15, 22, 24, 27)$

5. Estimate the $Z$-score for the value 88 in a dataset with mean 96 and standard deviation 10.

6. Suppose you have a bell shaped distribution with mean 10 and standard deviation 3. Use the 95% rule to find an interval that is expected to contain about 95% of the data values.