

AP Statistics

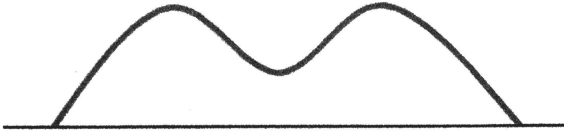
Unit 01 – Univariate Data

Homework #4

Name _____

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33. Sketches will vary, but here is one example:



35.

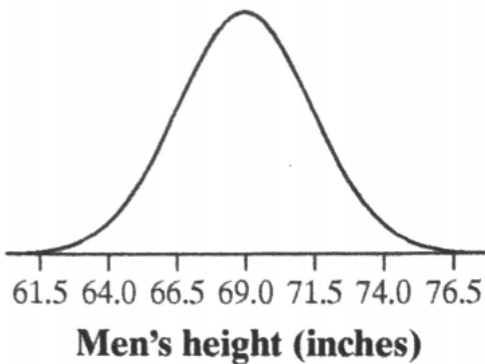
- a. It is on or above the horizontal axis everywhere, and the area beneath the curve is $\frac{1}{3} \times 3 = 1$
- b. $\frac{1}{3} \times 1 = \frac{1}{3}$
- c. Because $1.1 - 0.8 = 0.3$, the proportion is $\frac{1}{3} \times 0.3 = 0.1$

37. Both are 1.5

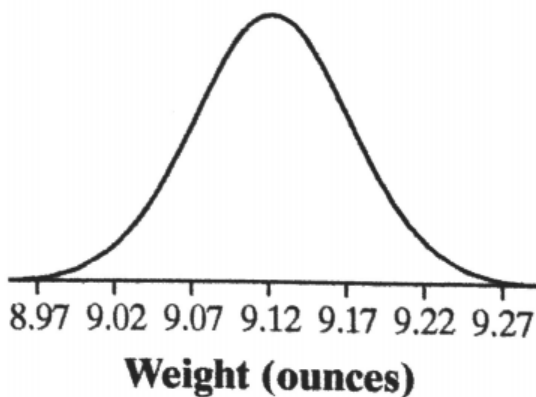
39.

- a. Mean is C, median is B
- b. Mean is B, median is B

41. The graph is shown below.



42. The graph is shown below.



43.

- a. Between $69 - 2(2.5) = 64$ and $69 + 2(2.5) = \mathbf{74}$ inches
- b. About $(100\% - 95\%)/2 = \mathbf{2.5\%}$
- c. About $(100\% - 68\%)/2 = 16\%$ of men are shorter than 66.5 inches and $(100\% - 95\%)/2 = 2.5\%$ are shorter than 64 inches, so approximately $16\% - 2.5\% = \mathbf{13.5\%}$ of men have heights between **64 inches and 66.5 inches.**

44.

- a. **Between** $9.12 - 0.05 = \mathbf{9.07}$ ounces and $9.12 + 0.05 = \mathbf{9.17}$ ounces
- b. About $(100 - 95)/2 = \mathbf{2.5\%}$
- c. About $(100\% - 68\%)/2 = 16\%$ of bags have weights greater than 9.17 ounces, and $(100\% - 99.7\%)/2 = 0.15\%$ of bags have weights less than 8.97 ounces, so approximately $100\% - 16\% - 0.15\% = \mathbf{83.85\%}$ of bags have weights between **8.97 and 9.17 ounces.**
- d. About $(100 - 68)/2 = 16\%$ of the bags weigh less than 9.07 ounces, so **9.07 is at the 16th percentile.**