

The life spans of wild tribbles are normally distributed with  $\mu = 3.8$  years and  $\sigma = 0.8$  years.

1. Sketch a normal curve, then label  $\mu$  and 3  $\sigma$ 's in each direction.
2. Shade the portion of the graph showing tribble life spans of 3.0 to 3.8 years. What percent is this?

In Population 1, the mean height of an adult male gorilla is 5 ft 8 in, with a standard deviation of 7.2 in. In Population 2, the mean height is the same, but the standard deviation is 4.3 in.

3. Sketch a separate normal curve for each population, then label  $\mu$  and 3  $\sigma$ 's in each direction.
4. Shade the portion of each graph representing heights greater than 6 ft. Compare your sketches and explain your reasoning.

Frosted Sugar Squishies are packaged in boxes labeled 'Net Weight: 16 oz.' The filling machine is set to put 16.8 oz in each box, with a standard deviation of 0.4 oz.

5. Sketch a normal curve, then label  $\mu$  and 3  $\sigma$ 's in each direction.
6. Shade the portion of the graph representing boxes that are below the labeled weight.
7. What percentage of boxes does the shading represent? Is this acceptable? Explain.

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