**Which Graph has the Larger Standard Deviation?**

**Answers to the items:**

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| ITEM | **sd of Graph A** | **sd of Graph B** | **Correct Decision** | **Reason** |
| **1** |  = 1.528 |  = 1.399 | **A** is larger | Distributions that are more bell-shaped typically have a smaller SD than those that are skewed. |
| **2** |  = 1 |  = 0.5 | **A** is larger | There are more points farther away from the mean in plot A than in plot B. |
| **3** |  = 0.5 |  = 0.5 | SAME | The distributions are just a mirror image of each other so the SDs will be the same. |
| **4** |  = 1.042 |  = 1.757 | **B** is larger | Distributions with smaller range of values and are bell-shape have a smaller SD than those that have a wider spread of values and uniform shape. |
| **5** |  = 2.739 |  = 1.757 | **A** is larger | Large gaps in the distribution often make the SD larger than distributions with no gap (given the same range of values). |
| **6** |  = 1.757 |  = 1.862 | **B** is larger | Gaps in the distribution often make the SD larger than distributions with no gap (given the same range of values). |
| **7** |  = 1.732 |  = 1.038 | **A** is larger | Distributions that are more bell-shaped typically have a smaller SD than those that are bimodal. |
| **8** |  = 1.732 |  = 1.328 | **A** is larger | There are more points farther away from the mean in plot A than in plot B. |
| **9** |  = 1.038 |  = 1.328 | **B** is larger | Distributions that are more bell-shaped typically have a smaller SD than those that are skewed. |
| **10** |  = 2.869 |  = 1.434 | **A** is larger | Distributions that have a smaller range typically have a smaller SD, given they have the similar shape. |
| **11** |  = 1.434 |  = 1.434 | SAME | The distributions are just a mirror image of each other so the SDs will be the same. |
| **12** |  = 1.434 |  = 1.744 | **B** is larger | Distributions that are more bell-shaped typically have a smaller SD than those that are skewed. |
| **13** |  = 2.202 |  = 1.876 | **A** is larger | Even though plot A is bell-shaped, it has a larger range of values than plot B. |
| **14** |  = 2.111 |  = 2.681 | **B** is larger | Distributions with a larger range of values will have a larger SD. |
| **15** |  = 2.111 |  = 3.182 | **B** is larger | Gaps and a larger range of values make plot B have a larger SD than plot A. |