Joyce is a senior in high school and she took the SAT and the ACT. She earned a 1270 on the SAT and a 28 on the ACT. She is only planning on reporting ONE score to colleges on her applications.

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| 1. Which score do you think she should report? Explain your reasoning. | |
| 2. Suppose the scores on the SAT are normally distributed with a mean of 1084 and a standard deviation of 145 (collegeboard.com 2016)  a. Draw a picture to represent Joyce’s score relative to everyone’s score  b. Find Joyce’s standardized score (z-score)  c. Find Joyce’s percentile for her SAT score. | 3. Suppose that the scores on the ACT are normally distributed with a mean of 21 and a standard deviation of 5.4 (act.org)  a. Draw a picture to represent Joyce’s score relative to everyone’s score  b. Find Joyce’s standardized score (z-score)  c. Find Joyce’s percentile for her ACT score |
| 4. Which score should Joyce report? Explain your reasoning | |

Exercise 1: