Smarter Balanced Assessment Item Illustrating 8.EE.A.2

Maggie claims that when you raise a whole number to a power, the result is greater than the original whole number. That is, for a whole number s, $s^n > s$.

For example,
$4^2 > 4$
$2^3 > 2$

Maggie's claim is not true for all values of n and s. For what values of n and s is Maggie's claim true? Complete the inequalities.

$s > [\ \ ]$ and $n > [\ \ ]$

Answer Key
1; 1

Elaboration on Alignment
In the CCSS, there is a part of the text under Standard for Mathematical Practice 3 that describes an expectation that in later grades students learn to determine domains to which an argument applies. This item is an example of that expectation, asking students to restrict the values of the two variables so that the mathematical claim s^n > s will be true. This item shows how the mathematical practices can be used in conjunction with the content standards to deepen students' understanding of the mathematics they are learning.

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