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| **Content: Math** | | | | **Grade Level: 8th** | |
| **Standard: 8.EE.2**  Use square root and cube root symbols to represent solutions to equations of the form x² = p and x³ = p, where p is a positive rational number.  Evaluate square roots of small perfect squares and cube roots of small perfect cubes.  Know that is irrational. | | | | | |
| **I can statements:**  • Use square root symbols to represent solutions to equations in the form x² = p where p is a positive rational number.  • Use cube root symbols to represent solutions to equations in the form x³ = p where p is a positive rational number.  • Recognize that squaring a number and taking the square root of a number are inverse operations.  • Recognize that cubing a number and taking the cube root of a number are inverse operations.  • Evaluate square root of a perfect square.  • Evaluate the cube roots of a perfect cube.  • Explain why the square root of a non-perfect square is irrational. | | | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | | | **Sample Activities** |
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|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. | | |  |
| **Score 3.0** | **The student:**   * Use inverse operations to solve and equations where p is a positive rational number.   • Explain why the square root of a non-perfect square is irrational.  **The student exhibits no major errors or omissions.** | | | | * • * • * What is the side length of a square with an area of 49 ft2? * Is rational or irrational? Explain why. |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content. | | |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls specific terminology, such as:   + square/square root   + cube/cube root * performs basic processes, such as:   + Evaluate square root of a perfect square.   + Evaluate the cube roots of a perfect cube.   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | | | | * Give an example of a number that is a perfect square. |
|  | **1.5** | Partial knowledge of the 2.0 content, but major errors or omissions regarding the 3.0 content. | | |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | | | |
|  | **0.5** | | With help, a partial understanding of the 2.0 content, but not the 3.0 content. | |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | | | |