Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Math 8 Unit 1 Syllabus

Square Roots & Cube Roots

**Essential Questions:**

* What makes a number a perfect square?
* How does perfect square relate to the area of a checkerboard?
* What makes a number a perfect cube?
* How does a perfect cube relate to the volume of a cube?
* Why is it impossible to take the square root of a negative number?
* Why is it possible to take the cube root of a positive and negative number?
* Why is it useful to be able to approximate square roots?

**Objectives: As a result in learning, you should be able to...**

1. determine if a number is a perfect square or a perfect cube
2. list the first 15 perfect squares & list the first 5 perfect cubes
3. evaluate square roots of small perfect squares and cube roots of small perfect cubes.
4. estimate the value of square roots of non-perfect squares and find their approximate value on the calculator

**Key Vocabulary:** Square, cube, square root, cube root, principal square root, radicand, radical symbol

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| **TOC #** | **Assignments: G= Graded P= Practice**  | **Videos** |
| 1 | Unit 1 Syllabus | Squaring a Number |
| 2 | Unit 1 Cover Page | Finding Perfect Squares |
| 3-12 | Video Notes (G) | Cubing a Number |
|  | Square and Square Roots WS (P) | Finding Perfect Cubes |
|  | Kuta Square Roots (P) | Estimating Square Roots |
|  | Square Root Quiz (G) | Est. Sq Roots w/o a Calculator |
|  | Cubes and Cube Roots WS (P) |  |
|  | Estimating Square Roots (P) |  |
|  | Estimating Square Roots w/o a Calculator (P) |  |
|  | Unit 1 Study Guide (P) |  |
|  | Unit 1 Test (G) |  |
|  | Daily Warm Ups (G) |  |
|  | Entrance & Exit Tickets (G & P) |  |
|  | Vocabulary Foldable (P) |  |
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| Vocabulary | Definition |
| perfect square | the square of a rational number  |
| perfect cube | the cube of a rational number |
| square root | one of the two equal factors of a number |
| cube root | one of the three equal factors of a number |
| principal square root | the positive square root of a number |
| radicand  | the number under the radical symbol or number that is having its (square) root taken |
| radical symbol | $\sqrt{} $  |

Math 8 Unit 1 Vocabulary

square

cube

square root

cube root

principal square root

radicand

radical symbol