Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Core : \_\_\_\_\_\_\_\_\_\_

**Unit 1 Test Review: Exponents and Order of Operations**

**Vocabulary:**

1) Square \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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2) Cube \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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3) Exponent \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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4) Base \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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5) Root \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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**Directions: List the first 15 perfect squares.**

1. ­12 =\_\_\_\_\_\_\_\_\_\_\_\_, 22=\_\_\_\_\_\_\_\_\_\_\_\_, 32=\_\_\_\_\_\_\_\_\_\_\_\_, 42=\_\_\_\_\_\_\_\_\_\_\_\_, 52=\_\_\_\_\_\_\_\_\_\_\_\_

62=\_\_\_\_\_\_\_\_\_\_\_\_, 72=\_\_\_\_\_\_\_\_\_\_\_\_, 82=\_\_\_\_\_\_\_\_\_\_\_\_, 92=\_\_\_\_\_\_\_\_\_\_\_\_, 102=\_\_\_\_\_\_\_\_\_\_\_

112=\_\_\_\_\_\_\_\_\_\_\_, 122=\_\_\_\_\_\_\_\_\_\_\_, 132=\_\_\_\_\_\_\_\_\_\_\_, 142=\_\_\_\_\_\_\_\_\_\_\_, 152=\_\_\_\_\_\_\_\_\_\_\_

**Directions: List the first 5 perfect cubes.**

1. 13 = \_\_\_\_\_\_\_\_\_\_, 23=\_\_\_\_\_\_\_\_\_\_\_, 33=\_\_\_\_\_\_\_\_\_\_\_, 43=\_\_\_\_\_\_\_\_\_\_, 53=\_\_\_\_\_\_\_\_\_\_\_\_

**Directions: Find the two square roots of each number.**

1. $\sqrt{144}$
2. $\sqrt{196}$
3. $\sqrt{9}$

Answer: \_\_­­\_\_\_ and \_\_\_\_\_

Answer: \_\_\_\_\_ and \_\_\_\_\_

Answer: \_\_\_\_\_ and \_\_\_\_\_

**Directions: Evaluate. For square roots, use the principal square root.**

1. 
2. 
3. 

Answer: \_\_\_\_\_\_\_\_\_\_\_\_\_\_

Answer: \_\_\_\_\_\_\_\_\_\_\_\_\_\_

Answer: \_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Dections: Simplify each expression.** *Remember to follow Order of Operations!*

1. $(2+8)^{2}-5^{2 }x 2$ 15) 6 ÷ 3 x 8 + $\sqrt{4}$

Answer: \_\_\_\_\_\_\_\_\_\_\_\_\_\_ Answer: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Directions: Apply your knowledge by answering the following questions.**

1. Arianna is moving to college and has many items she wants to take with her. She has decided to pack some of her items in a crate the shape of a cube. If one side of the crate is 3 feet in length, how much of Arianna’s stuff will the crate hold (in cubic feet)?
2. Mario is designing a video game and has to build the board so that no square in the game is more than 16 square inches. What is the longest side length any square could have?