5 (AM) Advanced Mastery 100%
4 (M) Mastery 93%
3 (VM) Vital Mastery 82%
2 (FM) Foundational Mastery 70%
1 (NYM) Not Yet Mastered 45%
0 (NA) No Attempt 0%

Name: _____

Per: _____ Date: _____

Pre-Assessment

IM2 – 1.1 (A – V1 Pre) Rational Exponents & Radicals

Standards & Skill Mastery

Student Self-Score	Skills Assessed / Goals	Teacher Score
	N.RN.1 – I can explain rational exponents and their parts, as well as use notation to show an equivalent expression in radical form.	

Pre-Assessment Plan

Check all that apply. To study for this assessment, I will…

- ☐ independently, rework this pre-assessment.
- ☐ complete all of my practice.
- ☐ watch tutorials online.
- ☐ study my notes until I understand them.
- ☐ work through practice problems & recheck answers.

To maintain or improve my mastery, I will study by…

_____

_____

_____

_____

_____

Key Terms, Formulas, & Notes

Equivalent Expressions ≡ expressions with equal values

Rational Exponent ≡ an exponent that is a rational (fractional) number

Roots ≡ The root of a number x is another number, which when multiplied by itself a given number of times, equals x

Directions - *(N.RN.1) Given the following expressions, expand the base, simplify the expression, and explain the simplification.*

1. $32^{\frac{8}{5}} = (\qquad)^{\frac{8}{5}} = \_\_\_\_\_$

   Explanation: The simplified expression is _____

   _____.

2. $625^{\frac{1}{4}} = (\qquad)^{\frac{1}{4}} = \_\_\_\_\_$

   Explanation: The simplified expression is _____

   _____.

3. $343^{\frac{2}{3}} = (\qquad)^{\frac{2}{3}} = \_\_\_\_\_$

   Explanation: The simplified expression is _____

   _____.

Directions - *(N.RN.1) Explain why the two expressions are equivalent, showing the steps for simplification.*

4. $\sqrt[7]{128^2} = \left(\sqrt[7]{128}\right)^2$

5. $\sqrt{64^3} = \left(\sqrt{64}\right)^3$