RADICALS – 1. Number Types

Name:

Date:

Please remember to show/communicate all your work. You DO NOT need to answer every question, two correct answers at any level will demonstrate a student's level of attainment.

LEGEND						
✓	M	✘	S	N	G	H
correct	mostly correct	incorrect	silly mistake	did not know how to start or skipped	with group	got help

	Mild (🌶🌶)		Medium (🌶🌶🌶)	Spicey (🌶🌶🌶🌶)	
Questions	#1	#2	#3	#4	#5
Results					

---

1. Place the following numbers along the top row so that the descriptions match up.

$$1 \quad \sqrt{-142} \quad \pi \quad \frac{2}{3} \quad \sqrt[3]{-27} \quad 0.\overline{671} \quad 3\sqrt{7} \quad 0 \quad -\sqrt{16}$$

# Type									
Real $\mathbb{R}$	✓	✓	✓	✓	✓	✓	✓	✓	
Non-real i									✓
Rational $\mathbb{Q}$	✓	✓	✓	✓	✓	✓			
Irrational $\overline{\mathbb{Q}}$							✓	✓	
Integer $\mathbb{Z}$	✓	✓	✓	✓					
Whole W	✓	✓							
Natural $\mathbb{N}$	✓								

RADICALS – 1. Number Types

2. Rewrite using only exponents: $\frac{2}{\sqrt[3]{x^5}}$

3. Rewrite as a single radical: $(-3x^3)^{\frac{-2}{3}}$

4. Using the digits 3-9 at most one time each, form a true statement can cannot be simplified further. Explain some of the steps you took to solving, your initial thoughts/attempts, and include any rough work to help show your thinking.

$$\square\sqrt{\square} < \square\sqrt{\square} < \square\sqrt{\square}$$

5. Using the digits 3-9 at most one time each, form two true statements. Explain some of the steps you took to solving, your initial thoughts/attempts, and include any rough work to help show your thinking.

$$\sqrt{\square\square} = \square$$

$$\square < \sqrt{\square\square} < \square$$