**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Has Grit           Date\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period \_\_\_**

**Analytic Geometry for College Graduates Day 38 CW/HW**

**Unit 4: Extending the Number System | Topic:** Classifying Rational and Irrational Numbers

|  |  |
| --- | --- |
| **Rational Numbers** | **Irrational Numbers** |
| **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ decimal**  *Examples* | **Non-\_\_\_\_\_\_\_\_\_\_\_\_\_,**  **Non-\_\_\_\_\_\_\_\_\_\_\_\_\_ decimal, or**  **Non-\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ radicals**  *Examples* |
| **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ decimal**  *Examples* |
| **Radicals with \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  *Examples*  **=** |

**Is It Rational?**

**For each of the numbers below, decide whether it is rational or irrational. Explain your reasoning in detail.**

|  |  |
| --- | --- |
| **Rational or Irrational?** | **Detailed reason why:** |
| **1. 5** |  |
| **2.** |  |
| **3. 0.575** |  |
| **4.** |  |
| **5.** |  |
| **6.** |  |
| **7.** |  |
| **8.** |  |
| **9.** |  |

**In the right-hand column, write whether you agree or disagree with each student’s statement.**

|  |  |
| --- | --- |
| 11. Rihanna says “ is an irrational number” |  |
| 12. Beyonce says, “No, Rihanna, it is rational because can be written as a fraction.” |  |
| 12. Jay-Z says, “Maybe Beyonce’s correct, you know. Because |  |
| 13. Kanye says, “Hang on, I’mma let you finish but the decimal would go on forever if you tried to write it. That’s what the bar thing means, right?” |  |
| 14. Drake says, “And because it goes on forever, that proves that has got to be irrational. |  |