Rational and Irrational Number Project: **Standard: 8.NS.1** Know that real numbers are either rational or irrational. Understand informally that every number has a decimal expansion which is repeating, terminating, or is non-repeating and nonterminating.

The goal is to create a video for publication for other students who are studying this topic to get help if they don't understand that shows that they can do the following **SKILLS**.

1. know what a rational number is and give examples that are in multiple forms (whole numbers, terminating decimals, repeating decimals, square roots)
2. know what irrational numbers are and give multiple examples in different forms.
3. convert repeating decimals into fractions, explaining how you know they are rational. (multiple examples, at least one with 1 digit repeating, at least one with 2 or more digits repeating)
4. convert terminating decimals into fractions, explaining how you know that they are rational. Give at least 3 examples with different number of digits in each one.

**Checklist: Your video needs to do each of the following:**

1. at the beginning of the video make sure to introduce what your video is about
2. the viewer needs to see the numbers that you are working with
3. the viewer needs to hear the numbers that you are working with (make sure that you have this written out before you begin to video record)
4. include vocabulary words that are related to the problem and the concept; these will help the viewer know that you know what your topic is about and help you better communicate your ideas to your audience
5. explain the steps you did to solve the problem
6. tell what strategy or strategies you used to solve the problem or demonstrate that you understand the concept.
7. tell why you used the strategy
8. tell why you did the steps that you did to show you know the skill
9. include a check step.
10. be creative
11. make sure there is no background noise that will distract the viewer from the learning in the video.
12. make sure to watch the video you produce before you turn it in

**Grading Process:**

To get an A, you video has all 4 skills and all of the above criteria; may not have 5, 15, 16.

To get a B, your video has at least 3 skills as well as 6, 7, 8, 9, 12, 13. May not have 5, 10, 11, 14, 15, 16.

To get a C, your video has at least 2 of the above 4 skills as well as a combination of at least 4 of the following: 7, 8, 9, 10, 11, 12, 13.

To get a D, your video has at least a of the 4 skills above and at least 2 of the following: 7, 8, 9, 10, 11, 12, 13.

To get an F, your video has no skills presented. Your video has all skills presented but presented incorrectly.