Sentences you should know for the Regents!

1. **Rational**: It is a **rational number** because it can be written as the ratio of two integers where the denominator is not equal to zero.

2. **Irrational**: It is an **irrational number** because it is a non-terminating and non-repeating decimal that can't be written as the ratio of two integers whose denominator is not zero.

Extra Rational/Irrational sentences:

The sum of two rational number is <u>always</u> rational

The product of two rational numbers is <u>always</u> rational

The sum of a rational number and an irrational number is <u>always</u> irrational

The sum and product of two irrational numbers is <u>sometimes</u> irrational

The product of a rational number and an irrational number is <u>sometimes</u> irrational

The product of a non-zero rational number and an irrational number is <u>always</u> irrational

3. **Function:** It is a function because each element of the domain corresponds to one and only one element of the range. (x-values do not repeat)

4. **Not a function**: It is **not a function** because each element of the domain does not correspond to one and only one element of the range. (x-values do repeat)

5. **Correlation Coefficient:** The correlation coefficient shows a strong positive linear relationship because the correlation coefficient is close to +1. (If it is exponential, change linear to exponential)
   ***Must say between the specific two variables when it says **in context**

6. **Correlation Coefficient:** The correlation coefficient shows a strong negative linear relationship because the correlation coefficient is close to -1. (If it is exponential, change linear to exponential)
    ***Must say between the specific two variables when it says **in context**

7. **Correlation Coefficient**: The correlation coefficient shows a
    weak linear relationship because the correlation coefficient is close to 0.
    (If it is exponential, change linear to exponential)
    ***Must say between the specific two variables when it says **in context**

8. **Rate of Change Sentence**: It is **linear** because the rate of change is constant on
    the first try/trial. (or 1st common difference)

9. **Rate of Change Sentence**: It is **quadratic** because the rate of change is constant
    on the second try/trial. (or 2nd common difference)

10. **Rate of Change Sentence**: It is **cubic** because the rate of change is constant
    on the third try/trial. (or 3rd common difference)

11. **Rate of Change Sentence**: It is **neither** because the rate of change is never
    constant (most likely absolute value or exponential.)

12. **Dotted line Inequality sentence**: Even though it is the POI (point of intersection) it is not a
    solution because one of the lines is dotted. Dotted means not equal to and therefore that point would
    not satisfy both inequalities and is not a solution point.

13. **Intersection of the shaded regions sentence**: Yes, it is a solution point because the point is in the
    intersection of the shaded regions and therefore would satisfy both inequalities making it a solution
    point.

<u>**Extra information:**</u>
<u>Explain</u>: Means you have to use words (can also have work)

<u>Justify</u>: Means you have to show work (can also have words)

<u>Algebraically</u>: Means you have to show work. You can not get and answer from your calculator (ex: from a graph or table) nor can you "guess" an answer and plug it in to show it works.

<u>Context</u>: You must describe using words from the question

<u>Exact Value</u>: NO rounding or decimal answers. It will probably be a fraction or radical answer