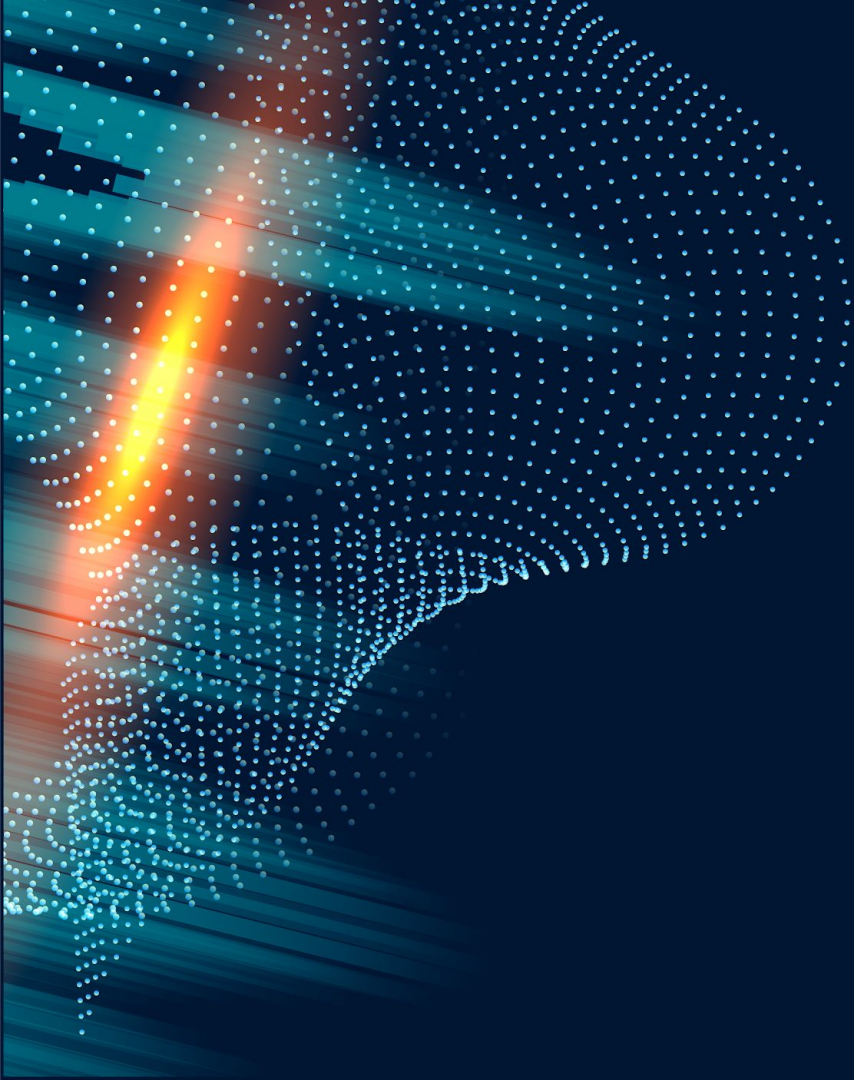# The Math Classroom

Of Tomorrow

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The questions themselves are important.

Don't get frustrated with a lack of answers.

Allow yourself to sit with the questions.

Important question:

1. What is something that you have learned in the past 2 years that you are confident you will apply to your classroom in the future?

- The LMS (learning management system)
- Your syllabus
- Your grading breakdown
- Format of assessments

What will you take with you moving forward?

Another Important question:

2. How do your classroom policies and practices align in regards to equity?

Equity

Equity OR Equality?

What do your classroom policies promote?
Equity or Equality

- A student is late to class?

- Deadlines on completing assignments?

- Amount of time given on an assessment?

- Grading scale?

- Working in groups with other classmates?

- The content of the course?

A final question:

3. What is most important for you to see in the modality of your future classes?

Some possible considerations:

- Hybrid/Flipped classrooms
- Teacher-Created videos
- Sharing information with students
- How students are assessed

Learn to Ask Better Questions

Ask students to explain a process in their own words.

Ask students to create an example with your provided criteria

Give students the graph and ask them to write the equation. Ask a follow up question.

Example: Explain a process in your own words

In your own words, state what TWO of the three properties of logarithms allow you to do with log statements.

After explaining the two properties, make up an example of each one using only the following values and/or variables: $a, y, 18, 3, and/or 7$

For the first 20 days of a flu outbreak, the number of students at VC who became ill is increasing. Which is worse: The number of students with the flu is increasing arithmetically or is increasing geometrically? Explain with mathematical reasoning and a concrete illustration.

Example:

Have students create an example with your provided criteria

Create a polynomial that has the following characteristics: **Degree of 4, one fractional zero with a multiplicity of 2, and two imaginary zeros**
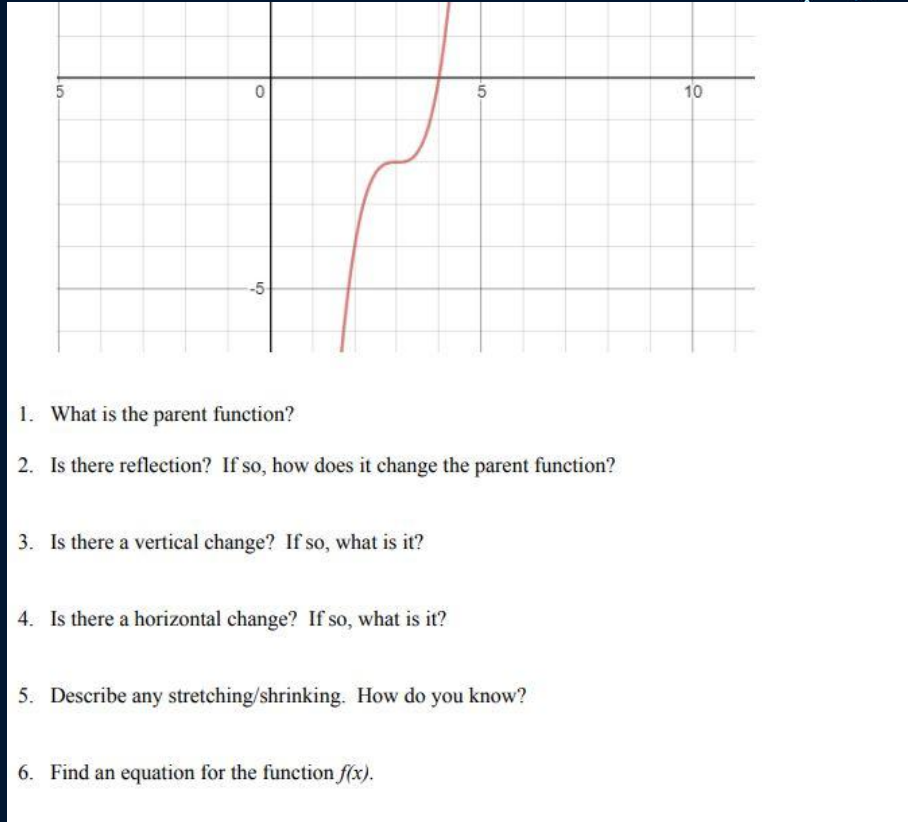
Once you have worked this out, write the polynomial in factored form and then in general form (multiplied out).

Create and draw the sketch of a graph of a rational function. The rational function needs to include the following characteristics:

1. It must be a rational function; 2. It must contain exactly 2 vertical asymptotes;

3. It must contain 1 horizontal asymptote at y=0; 4. It needs to be symmetrical to the origin; and   5. It will have a y intercept at 0.

6. *After drawing your graph,* *answer the following question: Do the vertical asymptotes that you drew HAVE to be symmetrical to the y axis in order for this graph to meet the criteria?*

Example:

Give students the graph and ask them to write the equation. Ask a follow up question.

1. What is the parent function?

2. Is there reflection? If so, how does it change the parent function?

3. Is there a vertical change? If so, what is it?

4. Is there a horizontal change? If so, what is it?

5. Describe any stretching/shrinking. How do you know?

6. Find an equation for the function $f(x)$.

Learn to Ask Better Questions continued

Give students a worked out problem and ask them to identify errors.

Solve a problem two different ways

If you want a procedural problem, ask follow up questions.

Don't let yourself settle for the former way of thinking
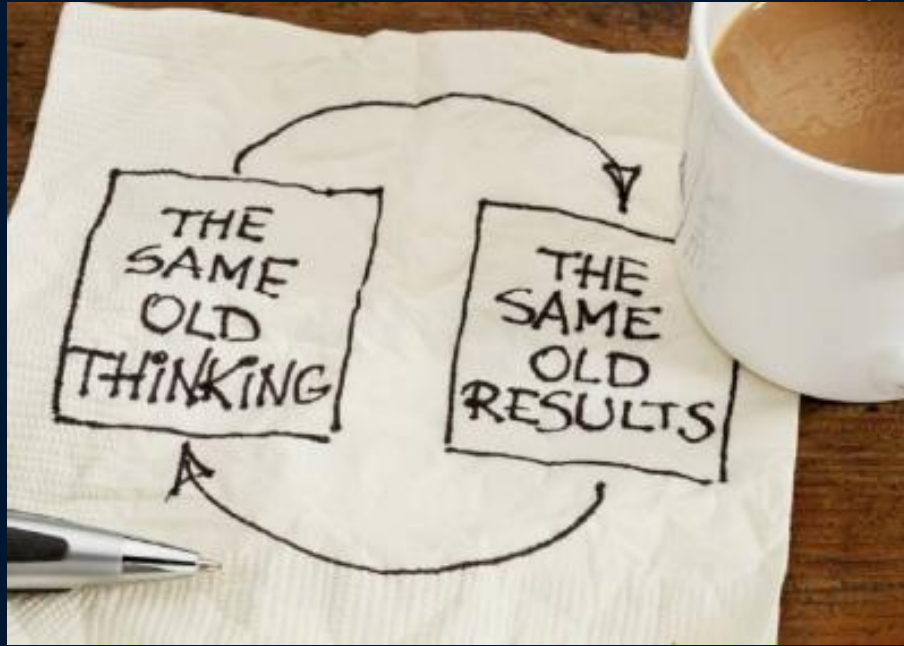
Let's go back, but let's do better!

Questions?

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