Prime Values

Go to http://tube.geogebra.org/student/m282343

Instructions: Move the value "a" across the slider in both directions.

A **prime number** is a number whose only divisors are 1 and itself.

1. Look in the algebra window at the value called "b." What happens to "b" as you move the slider?

2. What do you think the relationship between "b" and "a" are?

3. What happens to "b" if "a" is less than 1?

4. Based on your previous knowledge of what a prime number is, add to your definition by stating what prime numbers can be, and what they cannot be.

5. As "a" gets bigger, do you stop getting prime numbers? If we set the upper limit of "a" to a really big number like 5 million, do you think we would get prime numbers? What if our upper limit is infinity?

6. Is there a noticeable pattern for the prime numbers and when they occur?

Title: Prime Values

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Connection to Core Curriculum: High School Algebra - Prime numbers

Overview: Students will experiment with the applet and make conjectures about prime numbers.

Objectives:
1. Students will use the applet to discover that prime numbers are numbers that are greater than 1.
2. Students will use the applet to make the conclusion that prime numbers are infinite.
3. Students will use the applet to come to the conclusion that prime numbers do not have a specific pattern.

Materials Needed: Computer for each student

Technology: Prime numbers applet

Role of Technology: The applet allows students to explore the properties of prime numbers and make conjectures.

Web Reference: http://tube.geogebra.org/student/m282343

Activity Plan: Have students go to the website to explore the applet. Students will use the applet and their knowledge of prime numbers to complete the task sheet. After students have completed the tasks, we will have a class discussion on the properties of prime numbers and the uses of prime numbers.

Background: Students should know the basic definition of a prime number.
A **prime number** is a number whose only divisors are 1 and itself.

Included Documents: Task sheet