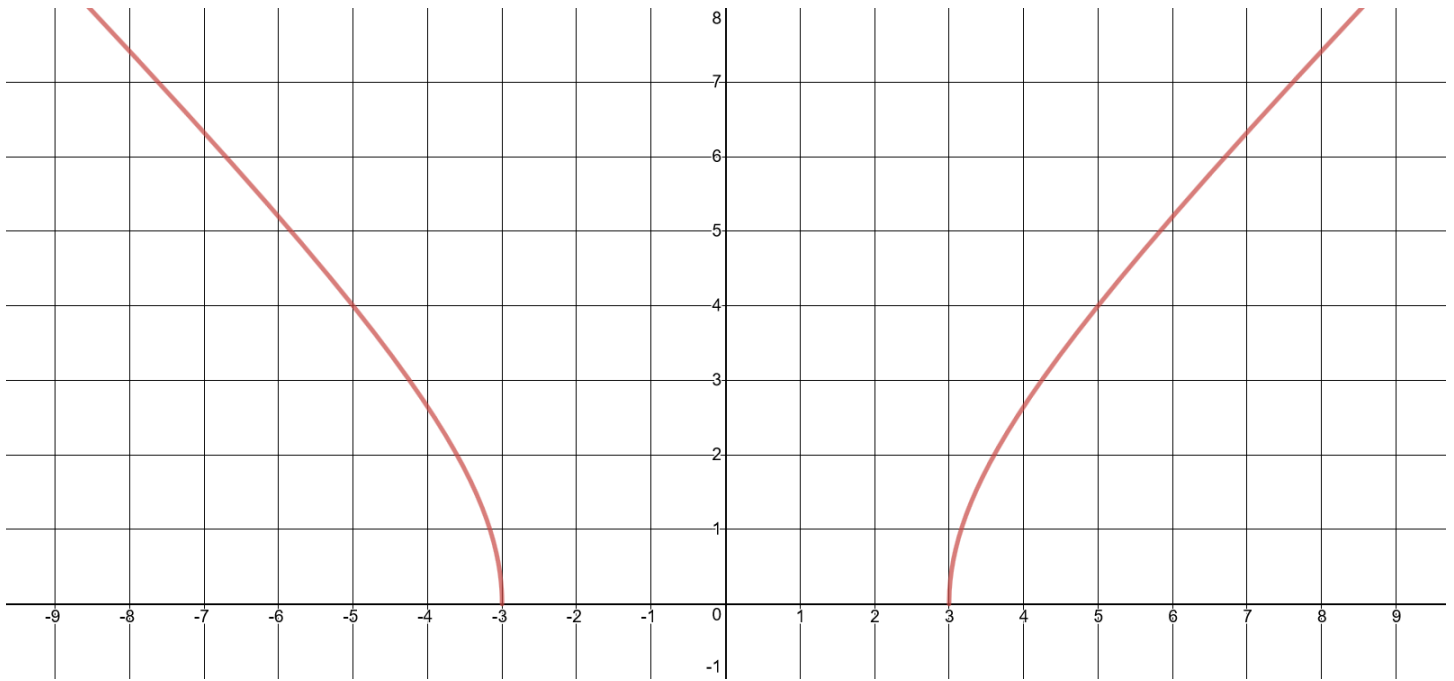


8A Review Day 1

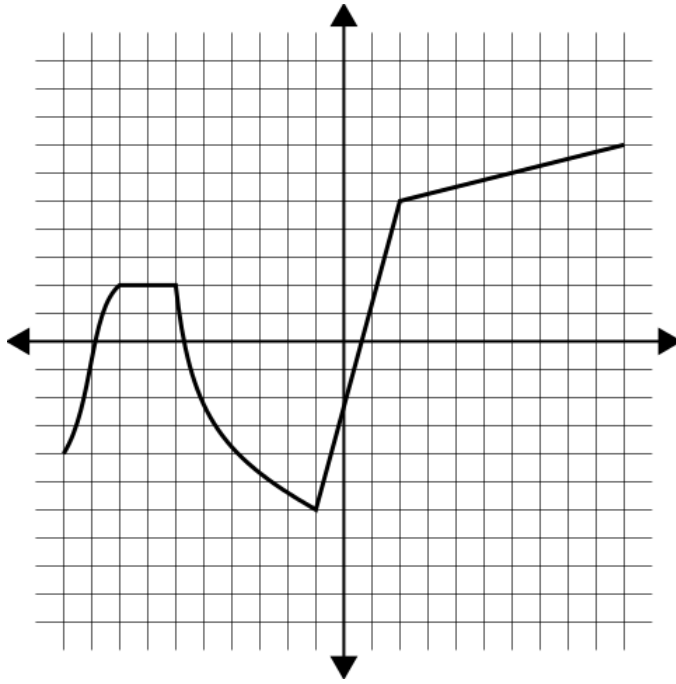
Describe the relationship graphed below. Use your vocabulary!



Write an example of a geometric sequence.

Write an example of an arithmetic sequence.

Write the interval using an inequality and check the appropriate box.



Interval	Increasing	Decreasing	Constant

Write the equation of the line that passes through the points $(-8, 34)$ and $(10, -29)$.

What is the line's slope?

What are the line's intercepts? (Both of them!)

Explain how to determine whether a sequence is arithmetic, geometric, or neither.

Determine if each of the following points is on the line given by the equation $f(x) = -\frac{2}{3}(x - 9) + 5$.

$(0, 0)$

$(-9, 5)$

$(-3, 13)$

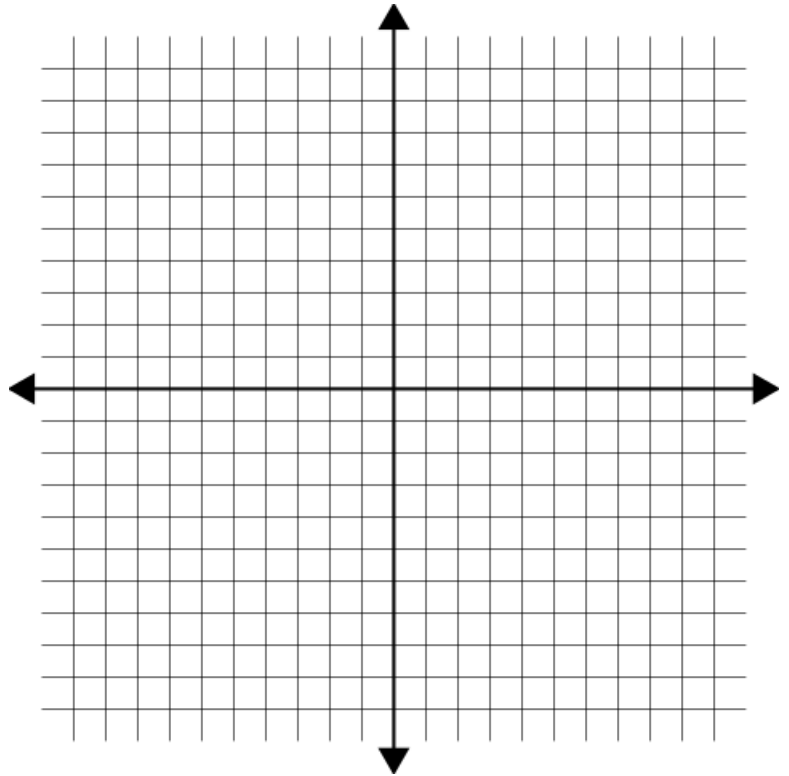
Use the graph below to draw a function with the given properties.

y-intercept: NONE

Vertical asymptote: $x = 6$

Range: $(-\infty, \infty)$

End behavior: As $x \rightarrow \infty, y \rightarrow -3$



Write the equation for any vertical line.

Write the equation for any horizontal line.

New year, new Mr. Carlson. That's the plan, at least, so MC decides to start a burpee buildup. On the first day, he does 6 burpees. On the second day, he does 12 burpees.

Write an equation for a function that models the number of burpees MC does on day d .

Is the function continuous or discrete? Explain why.

Is the function linear or exponential? Explain why.

What is the function's domain?

What is the function's range?

As Mr. Carlson ages, his luxuriant hair begins to slowly disappear. In his prime (i.e. when he was six), MC had 87,300,500 hairs on his head. Each passing year saw a 13.2% decrease in the number of follicles calling MC's scalp their home.

Write an equation for a function that models the number of hairs on MC's head in year t .

Is the function continuous or discrete? Explain why.

Is the function linear or exponential? Explain why.

What is the function's domain?

What is the function's range?

Will MC ever go bald?