

## **Engaging students immediately in the first 5 minutes of class with Function of the Day**

Function of the Day is 5-minute bell work that will get students engaged and talking about math immediately as they walk into the classroom. It increases student understanding of function concepts and terminology, and it helps increase student scores on state and college entry tests.

When students walk into the classroom, the equation for the function for the day is posted on the board. Students are expected to graph and analyze the function and write 10 attributes (facts) about the function. Facts for a linear function would include the intercepts, slope, domain and range, quadrants, and more. Each day the function builds on previous functions and increases in difficulty. Students keep their work organized in a notebook and may refer to their own work for assistance with facts. Students may work independently or in groups. As students work together in groups, they analyze and discuss the facts for the function. After 5 minutes the teacher checks the facts. Students may write facts on the board for checking or facts can be done together as a whole class with the teacher leading the discussion. The entire process for function bell work should take about 5-7 minutes.

There are a variety of ways to get students engaged and talking about the function. Combining students with partners or in groups of 3 works well to give all group members a chance to participate. Fill-in-the-blank questions may be displayed to help guide students as they analyze the facts for the function. These guided questions help students work efficiently and are also great for an assessment which are attached as a free resource. Competitions can be held to challenge students to work quickly, which can include the first group to finish 10 facts, or the group to find the most facts, or a whole class competition allowing each student to write a fact on the board. Because Function of the Day provides continuous repetition of concepts that build daily, students who struggle or lack confidence in math thrive with the function bell work and volunteer to participate because they are confident with the material.

Why use Function of the Day? It provides students with a rich math task daily that facilitates meaningful mathematical discourse. As students engage in math discussions about the function facts and concepts using the math terminology, their understanding is increased. Their conversations explaining how to find the domain or range, or the correct way to write the intercepts, show they understand the concepts.

Function of the Day affects students by building their confidence in math and providing them with a positive math experience. Students know what to do and how to do it. Students learn from each other by engaging in meaningful mathematical conversations. They better understand the concepts and terminology. Because Function of the Day builds in difficulty and uses previous concepts and terminology, students remember it long term, which helps them score better on state tests, ACT/SAT tests, and prepares them for college math.

Function of the Day is fun and engaging for students. It works for ALL students of ALL levels in ALL math classes. Teachers can adapt Function of the Day to fit their curriculum and their class. It also helps with classroom management and has almost no preparation involved.

I created Function of the Day several years ago and have used it in every math class I've taught. After great success with my students, year after year, I felt the need to share this idea with other math teachers and I wrote 2 Function of the Day books for teachers that contain a year's worth of bell work.

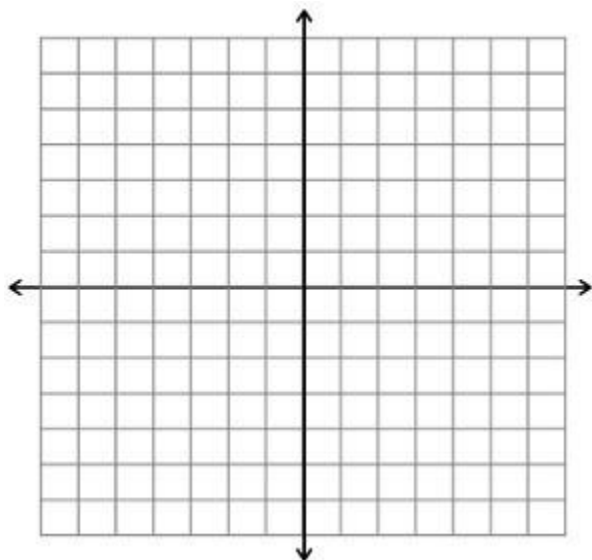
Books are available at <https://www.fodmath.com/>

<https://www.teacherspayteachers.com/Product/Function-of-the-Day-for-Algebra-1-8423020>

<https://www.teacherspayteachers.com/Product/Function-of-the-Day-8028000>

Date: \_\_\_\_\_ FOD # \_\_\_\_\_

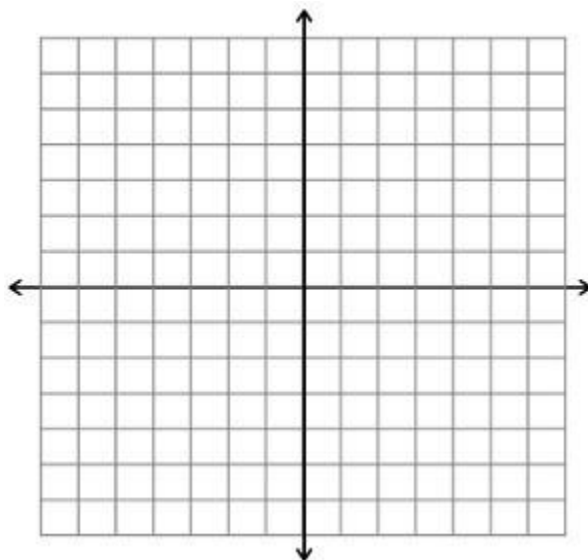
Function: \_\_\_\_\_



- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.

Date: \_\_\_\_\_ FOD # \_\_\_\_\_

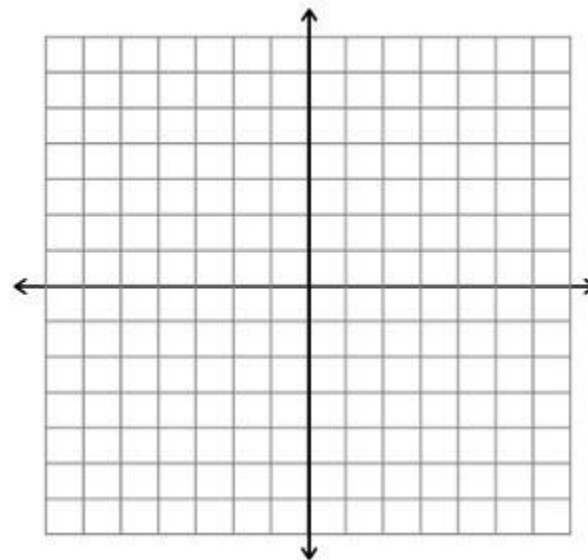
Function: \_\_\_\_\_



1. Function Type: Linear
2. Quadrants:
3. y intercept: ( , )
4. x intercept: ( , )
5. Slope:
6. Domain:
7. Range:
8. Increasing / Decreasing
9. Relation: Yes / No
10. Parent Function:

Date: \_\_\_\_\_ FOD # \_\_\_\_\_

$f(x) =$  \_\_\_\_\_  $f(x) =$  \_\_\_\_\_

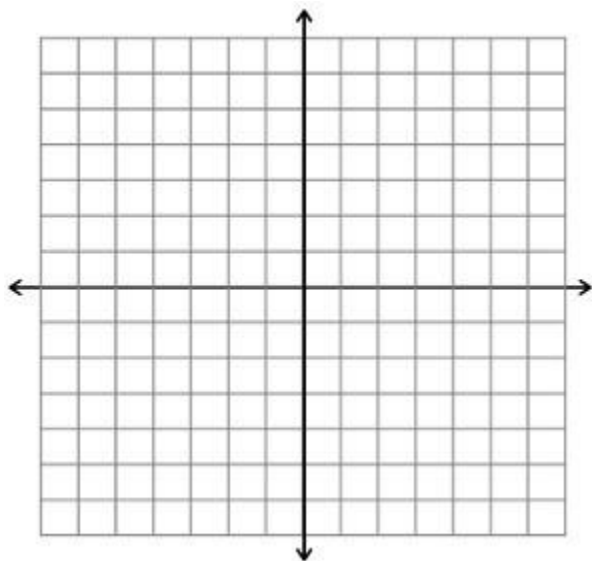


#1-6	$y =$	$y =$
Slope		
y intercept	( , )	( , )
x intercept	( , )	( , )

7. Solution to the system: ( , )
8. Are the lines perpendicular?
9. Why or why not?
10. Are the lines parallel?
11. Why or why not?

Date: \_\_\_\_\_ FOD # \_\_\_\_\_

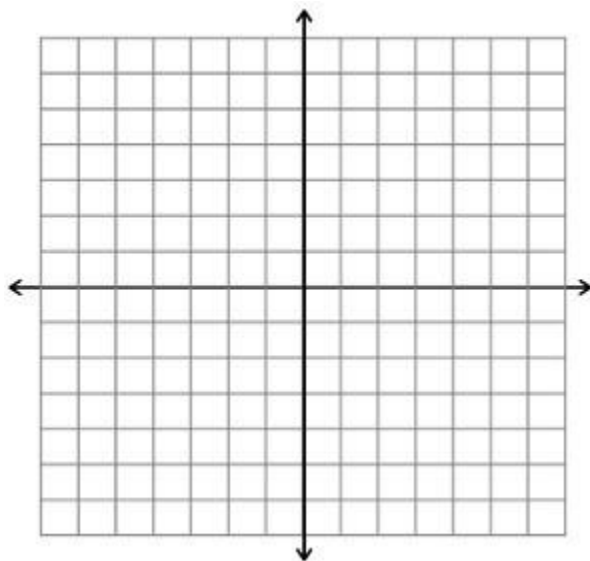
Function: \_\_\_\_\_



1. Function Type: Exponential
2. Increasing / Decreasing
3. Transformation:
4. y intercept:
5. x intercept:
6. Horizontal Asymptote:
7. Domain:
8. Range:
9. Quadrants:
10. Base:
11. Parent Function:

Date: \_\_\_\_\_ FOD # \_\_\_\_\_

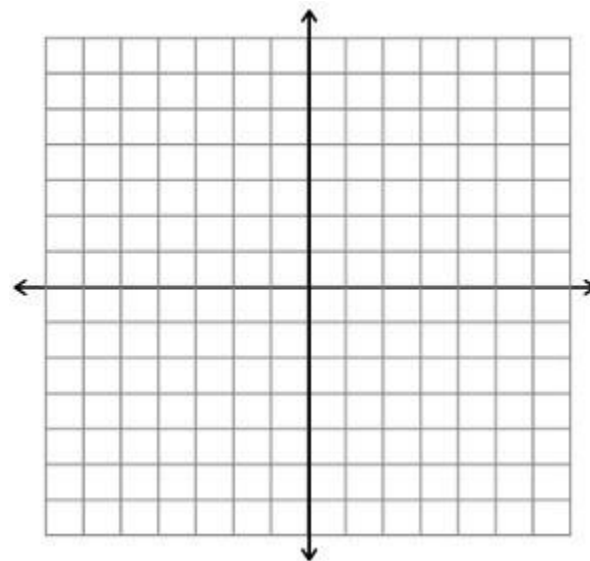
Function: \_\_\_\_\_



1. Function Type: Quadratic
2. Transformation:
3. y intercept
4. x intercept:
5. Vertex:
6. Maximum / Minimum
7. Axis of Symmetry:
8. Domain:
9. Range:
10. Quadrants:
11. Parent Function:

Date: \_\_\_\_\_ FOD # \_\_\_\_\_

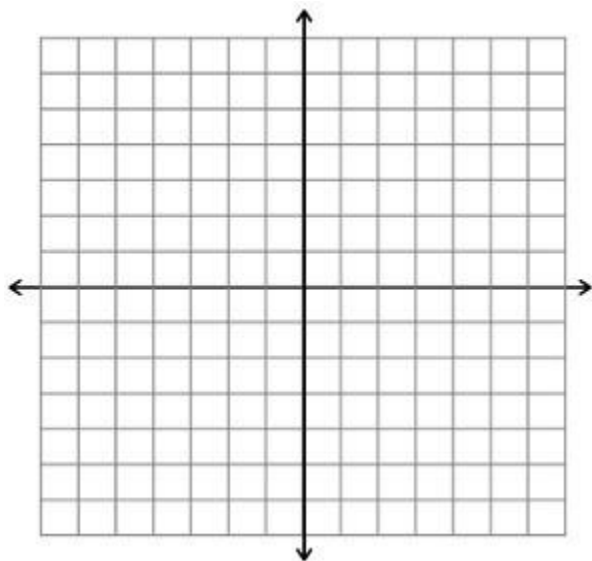
Function: \_\_\_\_\_



1. Function Type: Absolute Value
2. Transformation:
3. y intercept
4. x intercept:
5. Vertex:
6. Maximum / Minimum
7. Axis of Symmetry:
8. Domain:
9. Range:
10. Quadrants:
11. Parent Function:

Date: \_\_\_\_\_ FOD # \_\_\_\_\_

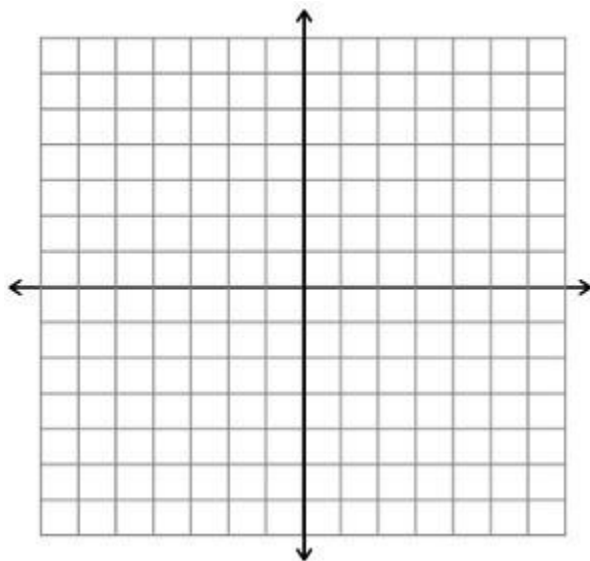
Function: \_\_\_\_\_



1. Function Type: Square Root or Radical
2. Transformation:
3. Increasing / Decreasing
4. y intercept:
5. x intercept:
6. Starting point:
7. Domain:
8. Range:
9. Quadrants:
10. Parent Function:

Date: \_\_\_\_\_ FOD # \_\_\_\_\_

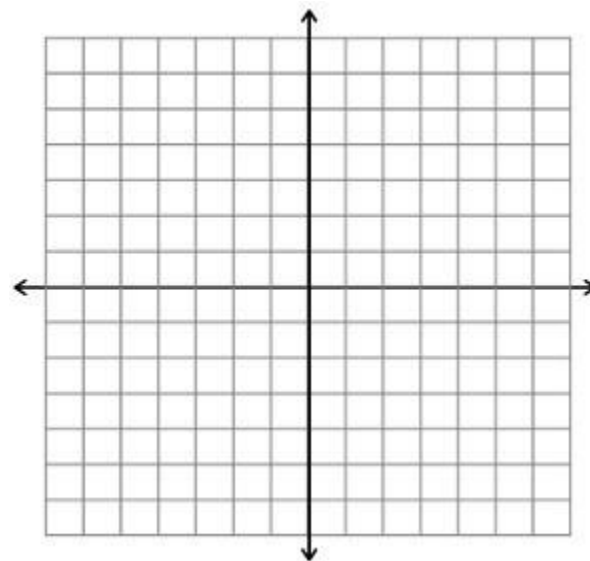
Function: \_\_\_\_\_



1. Function Type: Rational
2. Transformation:
3. y intercept:
4. x intercept:
5. Horizontal Asymptote:
6. Vertical Asymptote:
7. Domain:
8. Range:
9. Quadrants:
10. Parent Function:

Date: \_\_\_\_\_ FOD # \_\_\_\_\_

Function: \_\_\_\_\_



1. Function Type: Log / Natural Log
2. Increasing / Decreasing
3. Transformation:
4. y intercept:
5. x intercept:
6. Vertical Asymptote:
7. Domain:
8. Range:
9. Quadrants:
10. Parent Function: