

Instructions

Here are a couple of things to help set up this activity:

1. Understanding the Coordinate Plane

- a. The grid does not follow your standard mathematical coordinate system. Due to some coding restrictions, the coordinate system starts at (1, 1) in the top-left hand corner. As you move to the right, your x-value increases (Ex: $(1 \rightarrow 2, 1)$), and as you move down, your y-value increases (Ex: $(1, 1 \rightarrow 2)$).

A sample grid is shown below:

(1,1)	(2,1)	(3,1)
(2,1)	(2,2)	(3,2)

Before the activity starts, the activity manager should make this grid pattern on a flat surface. Each section should be the same size as your paper.

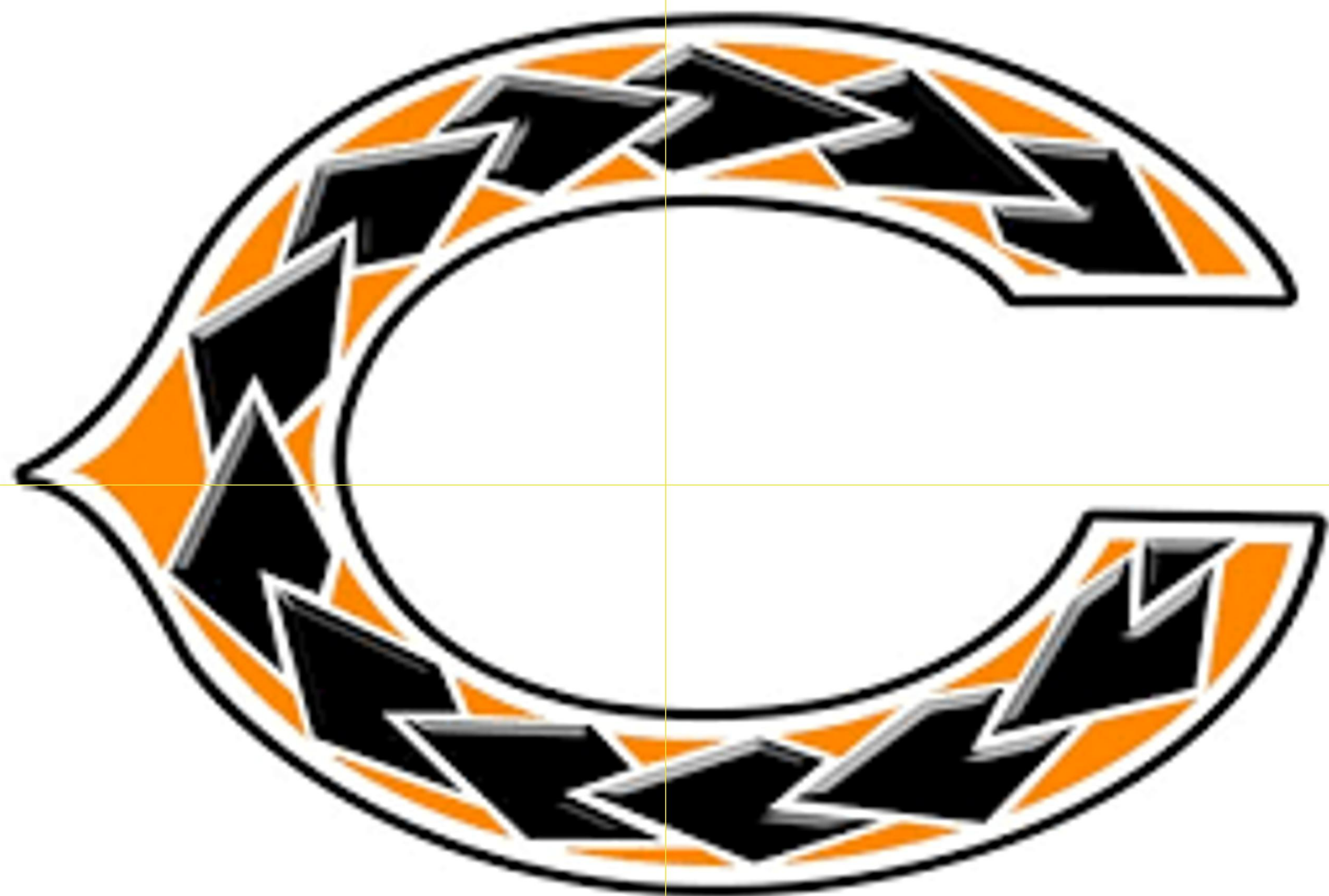
Once a player finds what they think is the right answer. They'll place their picture over the coordinate that matches their answer. Each answer comes with a coordinate next to it.

2. Matching the front and back pages

- a. The pages are printed in order, so if you are printing the fronts and backs separately, you can match the two pages using the order they print in. Your second page from your front pictures matches with the second page from your back pictures.
- b. If you have front and back printing, all you have to do is print it out.
- c. A key for the front pieces has been attached.

3. Suggestions for repeatability and fun

- a. Sheet Protectors and Laminators will let players write and erase expo scratch work on the back (perfect for math).
- b. I would suggest drawing the grid on the board and have students tape their piece over their grid piece.
- c. If players get the same coordinate answer for different pieces of paper, encourage them to work through both problems together.
- d. The players will know that they've made a mistake if the puzzle doesn't make sense at the end.
- e. This activity fits well for introduction activities/Do Nows, formative assessments during class, and review activities.



How many roots does the function below have?

$$y = x^2 + 2x + 1$$

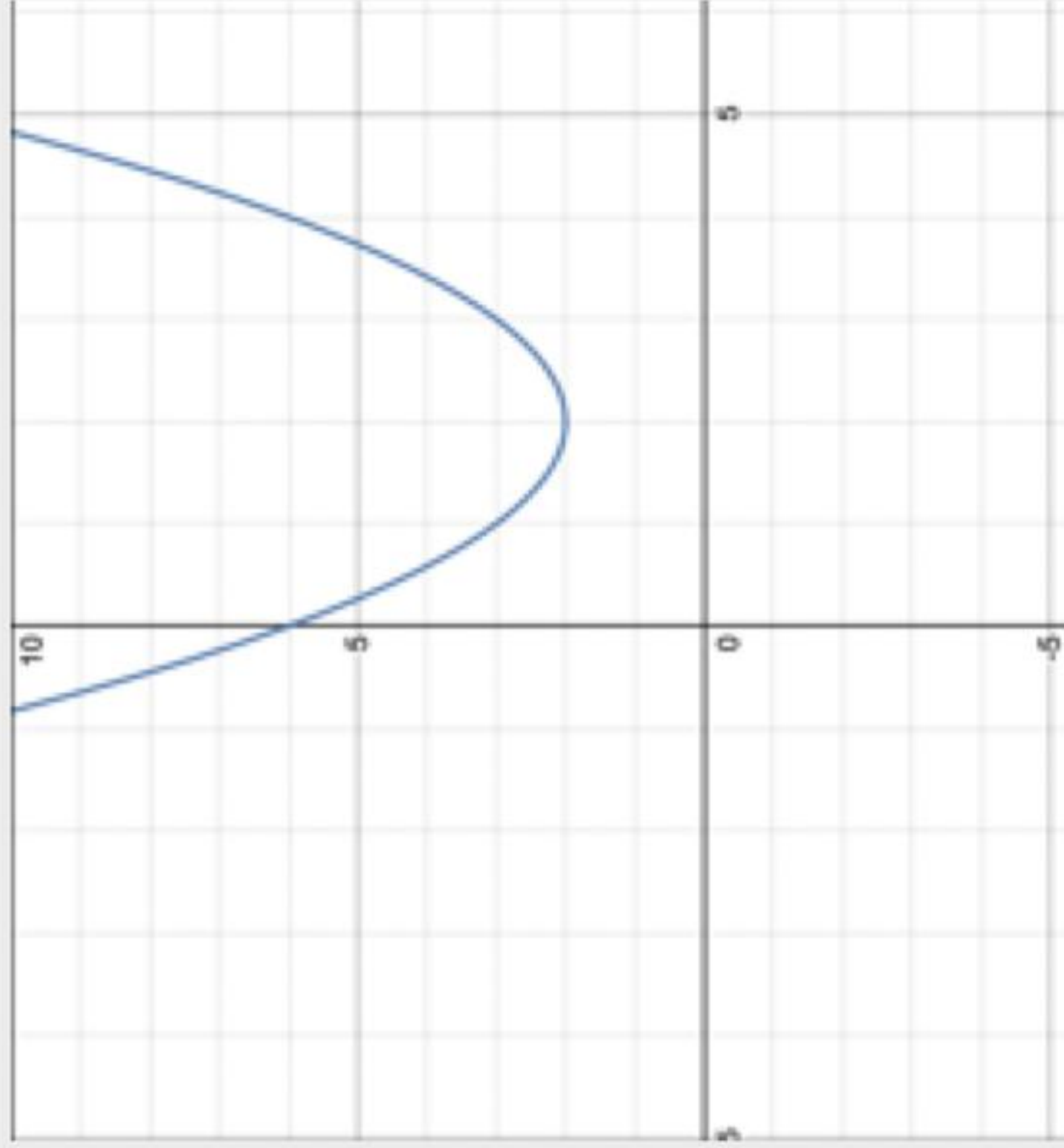
- | | |
|--------|------|
| (2,1): | Two |
| (2,2): | Zero |
| (1,1): | One |
| (1,2): | Four |

Rewrite the quadratic below in factored form

$$y = x^2 - 6x + 8$$

- | | |
|--------|----------------------|
| (2,1): | $y = (x - 3)^2 + 1$ |
| (1,1): | $y = (x + 4)(x + 2)$ |
| (1,2): | $y = (x - 4)(x - 2)$ |
| (2,2): | $y = (x - 3)(x - 3)$ |

True or False: The vertex of this quadratic is at $(-2, 2)$



- | | |
|--------|-------|
| (1,1): | True |
| (2,1): | False |

Math is...

- | | |
|--------|----------|
| (2,1): | Terrible |
| (1,1): | Awful |
| (2,2): | Fun |
| (1,2): | Boring |

