The (Awesome) Coordinate Plane Activity

CLASS CODE

30-45 minutes | Practice

In this activity students will encounter a series of challenges, each asking them to graph a point on the bullseye of a target. They will plot points in all four quadrants, first by plotting points using a table and then by using ordered pairs.

French translation courtesy of Jocelyn Dagenais:
https://teacher.desmos.com/activitybuilder/custom/5b0454f879405f0aa303a47f

Activity Checklist

- [ ] Complete the activity using student preview.
- [ ] Identify your learning targets for the activity.
- [ ] Determine the screens where you'll bring the class together using Teacher Pacing and Pause Class. What will you discuss on those screens?
- [ ] Anticipate screens where students will struggle, then plan your response.
- [ ] Plan a challenge for students who finish the activity quickly and successfully.
- [ ] Make yourself available during the activity to students for individual help and questions when appropriate.
- [ ] Write out your summary of the activity's main ideas. How will you pull student work into that summary? Which parts of the activity can you skip to ensure that summary receives sufficient time?

My Learning Targets:

Activity Screens: Teacher Pacing and Pause Class

Use this page to plan your use of Teacher Pacing and Pause Class. Teacher Pacing lets you restrict students to a single screen or a range of screens. Pause Class keeps students from interacting with whatever screens they are currently viewing. Use these two tools to create conversations in your classroom.

Consider these questions as you plan:

- Which screen(s) should everyone work on at the same time? Why?
- Which screen(s) do you want to keep students from seeing until you're ready for the class to see them together? (Perhaps because they reveal answers or require a whole class conversation for introduction.)
- Are there any points in the lesson where you will want to make sure students aren't playing with the screens while you discuss something as a class?

1 Target Practice #1

Time for some target practice!

2 Target Practice #2

Add numbers to the table below so the

3 Target Practice #3

Add numbers to the table below so the

4 Target Practice #4

We can also use a coordinate

f(x)

5 Make your own.

Drag the black point so that the

6 Target Practice #5

Enter an ordered pair below so that

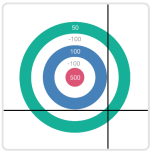
f(x)

7 Target Practice #6

Enter an ordered pair below so that

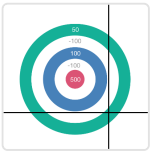
f(x)

8 Target Practice #7



Select points from the list to add to the

9 Reveal



Here is your score: 150

1 Target Practice #1

Time for some target practice!

Time for some target practice!

Change the numbers in the table below so the point hits the bullseye.

Teacher Tip:

Use the teacher dashboard to show the range of possible answers.

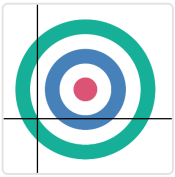
Sample Answers (with increasing precision)

- $(2,6)$
- $(2.3,5.9)$
- $(2.25,5.88)$

Note: Some students may be content to hit the bullseye. Others may strive to hit the very center of it. Either approach is fine for this activity.

My Notes:

2 Target Practice #2



Add numbers to the table below so the point hits

Add numbers to the table below so the point hits the bullseye. (If you don't like where your point is, try using a decimal.)

Teacher Tip:

Use the teacher dashboard to show the range of possible answers.

Sample Answer: $(3.5,2)$

My Notes:

3 Target Practice #3

Add numbers to the table below so the point hits

Add numbers to the table below so the point hits the bullseye.

Teacher Tip:

Use responses mode in the teacher dashboard to identify students who may need additional support.

Sample Answer: $(5.5,-4)$.

My Notes:

4 Target Practice #4

We can also use a coordinate pair

f(x)

We can also use a coordinate pair to hit the bullseye. Update the numbers below so the point hits the target.

Teacher Tip:

This is a great place to check student progress. Offer individual support where needed, or lead a brief whole-class discussion if enough students are struggling.

Sample Answer: $(-3,-2)$.

My Notes:

5 Make your own.

Drag the black point so that the target's center

Drag the black point so that the target's center is at $(-5,4)$.

Explain how you knew where to place the target.

Teacher Tip:

Use responses mode in the teacher dashboard to identify students who may need additional support. Highlight several student responses for the class. Start with informal math language and reasoning, then move to more formal responses.

Sample Answer: My strategy was to start at $(0,0)$ and move 5 spaces to the left and 4 spaces up. This is where the center of the target should be.

My Notes:

6 Target Practice #5

Enter an ordered pair below so that

$f(x)$

Enter an ordered pair below so that the point hits the bullseye.

Press "Submit" to check the location of your point.

Teacher Tip:

This is a great place to check student progress. Offer individual support where needed, or lead a brief whole-class discussion if enough students are struggling.

Sample Answer: $(4,-2.5)$.

My Notes:

7 Target Practice #6

Enter an ordered pair below so that

$f(x)$

Enter an ordered pair below so that the point hits the bullseye.

Press "Submit" to check the location of your point.

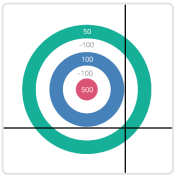
Teacher Tip:

Use the teacher dashboard to show the range of possible answers. If students aren't sure how to get started, ask them to try a point that they know is to the right and below $(-8,9)$.

Sample Answer: $(-3.2,5.5)$.

My Notes:

8 Target Practice #7



Select points from the list to add to the

Select points from the list to add to the graph. Aim for a high score!

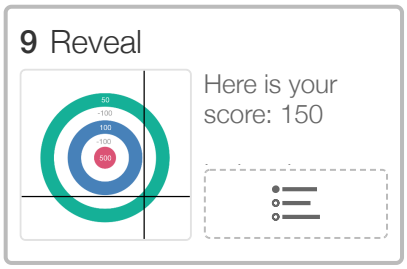
Continue to the next screen to see how you did.

Teacher Tip:

Use the teacher dashboard to show the range of possible answers.

Dashboard Note: ✅ indicates that all selected coordinates will earn positive points towards the total score.

My Notes:



Here is your score: 150

Is that the score you thought you would get?

Teacher Tip:

This is a great place to check student progress. Offer individual support where needed, or lead a brief whole-class discussion if enough students are struggling.

Sample Answer: This is not the score that I thought I would get. I estimated that the point $(-2,3)$ would be in the red target, but it was just to the right of the red target. A grid would be helpful for problems like this.

My Notes:

Summary Notes: