

Geometry and the TI-Navigator: Transformations Part 2, Rotations

Materials:

Student Worksheet

TI-73 or TI-84+ Graphing Calculator

TI-Navigator System

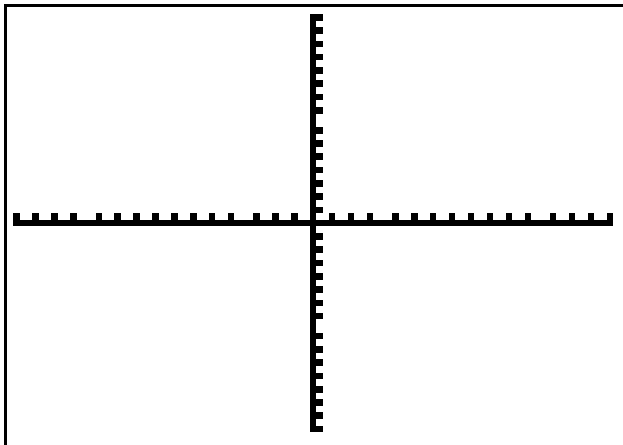
Instructions:

1. Open Navigator and Start Class.
2. Open Activity Center and load Trans.act Activity Settings.
3. Start Activity.
4. Pass out student worksheet.
5. Have students log on to NavNet and enter Activity Center.
6. Have students form the letter "F" in the first quadrant.
 - Do not allow students to share coordinates.
7. Have each student mark his/her point by pressing the soft key for MARK on his/her calculator.
8. Stop the activity (DO NOT CLEAR ACTIVITY DATA during entire activity).
9. Have students sketch the graph and record their point on the worksheet.
10. Instruct students to rewrite their ordered pair by leaving the x-coordinate the same and taking the opposite of the original y-coordinate. Now have students switch the x- and y-coordinates.
11. Restart the Activity.
12. Have students move to their new point and mark it.
13. Stop the activity and discuss.
14. Have students sketch the graph and record their point on the worksheet.
15. Instruct students to rewrite the original ordered pair with opposite x-coordinate and opposite y-coordinate values.
16. Have students record what they think will happen.
17. Restart the Activity.
18. Have students move to their new point and mark it.
19. Stop the activity and discuss.
20. Have students sketch the graph and record their point on the worksheet.
21. Instruct students to rewrite the original ordered pair by taking the opposite of the original x-coordinate and leaving the original y-coordinate the same. Now have students switch the x- and y-coordinates.
22. Have students record what they think will happen.
23. Restart the Activity.
24. Have students move to their new point and mark it.
25. Stop the activity and discuss.

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Log in to NavNet. Enter Activity Center. You will be forming the letter "F" in the first quadrant of the coordinate plane on your calculator. **DO NOT SHARE A POINT WITH ANYONE!!**

Sketch the graph

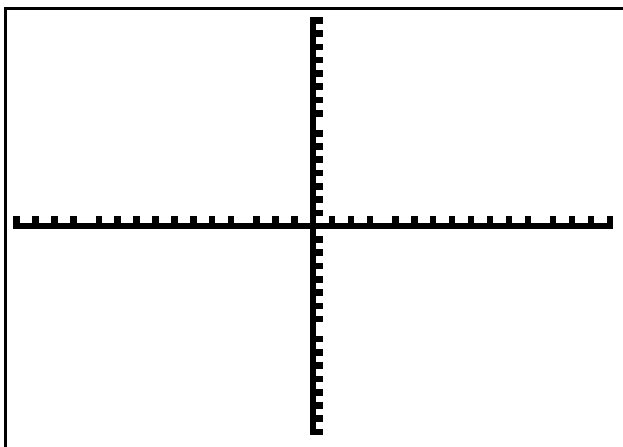


What is your coordinate? _____

Rewrite your ordered pair by leaving the x-coordinate the same and taking the opposite of the original y-coordinate. _____

Now, switch the x- and y-coordinates _____

Sketch the graph



What was your original coordinate? _____

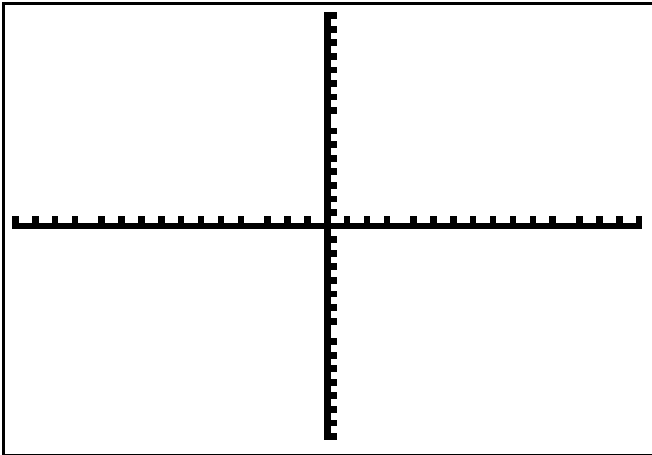
What is your new coordinate? _____

This is a rotation of how many counterclockwise degrees? (circle one) 90° 180° 270°

Rewrite your ordered pair by taking the opposite of the original x-coordinate and the opposite of the original y-coordinate. _____

What do you think will happen to the graph? _____

Sketch the graph



What was your original coordinate? _____

What is your new coordinate? _____

This is a rotation of how many counterclockwise degrees? (circle one) 90° 180° 270°

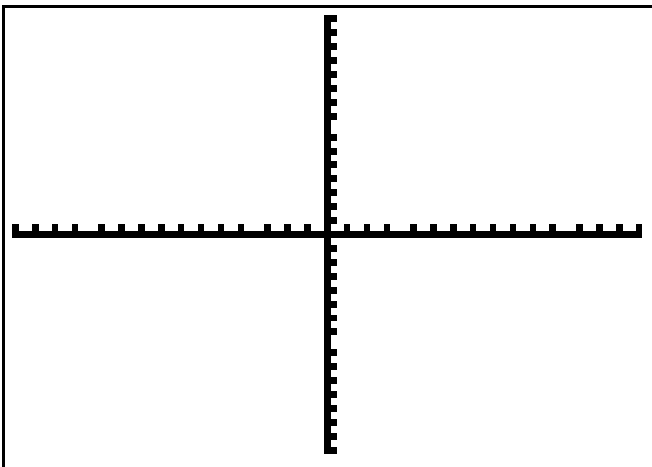
What other transformation yields the same result? _____

Rewrite your ordered pair by taking the opposite of the original x-coordinate and leaving the original y-coordinate the same. _____

Now, switch the x- and y-coordinates _____

What do you think will happen to the graph? _____

Sketch the graph



What was your original coordinate? _____

What is your new coordinate? _____

This is a rotation of how many counterclockwise degrees? (circle one) 90° 180° 270°