

Unit 2 Lesson 25: Representing Systems of Inequalities

1 Which One Doesn't Belong: Splash Zone! (Warm up)

Student Task Statement



Which one doesn't belong?

A: Clare's family wants to

- spend at least 4 hours at the amusement park
- spend more time in the Splash Zone than riding rides

B: Jada's family wants to

- be at the amusement park from 4 p.m. to 8 p.m.
- spend most of their time riding rides

C: Priya's family wants to

- spend 2 hours at Splash Zone
- spend 2 hours riding rides

D: Diego's family wants to

- spend no more than 6 hours at the amusement park
- spend at least twice as long riding rides as they spend at Splash Zone

2 Amusing Solutions

Student Task Statement

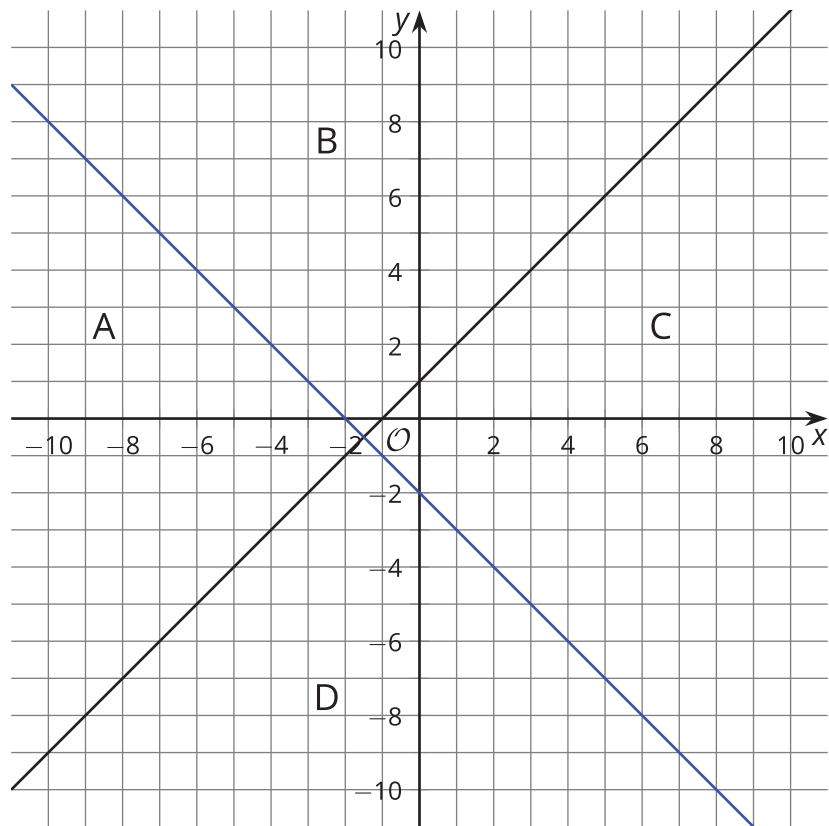
For each family, let x be the amount of time each family spends riding rides, and y be the amount of time each family spends at the Splash Zone.

List one or more ordered pairs (x, y) that would fit the constraints. If you can only list one, explain why you can only list one.

1. Clare's family wants to spend at least 4 hours at the amusement park, and they want to spend more time in the Splash Zone than riding rides.
2. Jada's family wants to be at the amusement park from 4 p.m. to 8 p.m., and they want to spend most of their time riding rides.
3. Priya's family wants to spend 2 hours at Splash Zone and 2 hours riding rides.
4. Diego's family wants to spend no more than 6 hours at the amusement park, and they want to spend at least twice as long riding rides as they spend at Splash Zone.

3 Which Section?

Student Task Statement



1. The graph shows the lines $y = x + 1$ and $y = -x - 2$. Which line represents $y = x + 1$?
2. For each of the 4 regions, write a coordinate pair for a point in that region.
3. Change the equations represented by the lines into inequalities so that the region labeled as A is shaded by both inequalities.
 - a. y _____ $x + 1$
 - b. y _____ $-x - 2$
4. Use the coordinate pairs you chose for region A to check your inequalities.