Reflect Points Across Axes

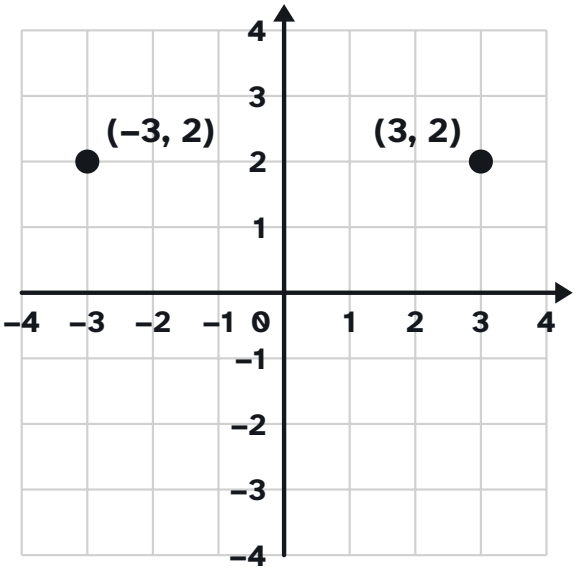
Reflect points across the x-axis and the y-axis.

Name _____ **Date** _____

Tonight's spark

A treasure marker sits at (3, 2) on a map. The map is folded along the up-and-down line through the center, like a mirror. Where does the marker's twin land?

Make a guess first: does the twin land on the left side or the right side?



Our class model: the axis you flip over

Try it

Work it out on paper. Write one answer on each line.

1 **Reflecting over the y-axis changes the sign of which coordinate?**

A. The x-coordinate **B.** The y-coordinate **C.** Both coordinates

My answer _____

2 **Reflect (5, 2) over the y-axis.**

A. (5, −2) **B.** (−5, 2) **C.** (−5, −2) **D.** (2, 5)

My answer _____

3 **Reflect (−3, 4) over the x-axis.**

A. (3, 4) **B.** (3, −4) **C.** (−3, 4) **D.** (−3, −4)

My answer _____

4 **Reflect (1, –6) over the y-axis.**

A. (–1, –6) **B.** (1, 6) **C.** (–1, 6) **D.** (–6, 1)

My answer _____

5 **A point is reflected over the x-axis and lands at (7, –3). What was the original point?**

A. (–7, –3) **B.** (7, 3) **C.** (–7, 3) **D.** (3, –7)

My answer _____

6 **Which pair of points are reflections of each other over the y-axis?**

A. (2, 3) and (2, –3) **B.** (2, 3) and (–2, –3) **C.** (2, 3) and (–2, 3) **D.** (2, 3) and (3, 2)

My answer _____

Talk about it

Which axis is the mirror? Which coordinate changes sign and which stays the same?

Home mission

Stand a small toy 3 spoon-lengths in front of a mirror. How far behind the mirror does its twin seem to be? Move the toy to 5 spoon-lengths. What happens to the twin?

If we get stuck, ask

- Which line are we flipping over, the x-axis or the y-axis?
- Over the x-axis the y changes; over the y-axis the x changes. Which one is it here?
- Only one number changes its sign. Which number stays exactly the same?

Do it on a screen

Scan or type the link. Same lesson, with hints.

eduwonderlab.com/lessons/7-9/homework.html

How did it feel? (optional)

Tricky Getting there Got it