Answers and talk notes

Ordered Pairs in All Four Quadrants

What your student is learning

Tonight we plot points in all four parts of the grid, called quadrants. Now the numbers can be negative, which means left or down.

Answers

Ask your student to explain before you look.

1. **B.** Left 2. A negative first number means move left, so Left 2.
2. **C.** Down 3. A negative second number means move down, so Down 3.
3. **D.** (−3, −2). Left 3 is x = −3 and down 2 is y = −2, so (−3, −2).
4. **A.** (−2, 3). Upper left means left (negative x) and up (positive y), so (−2, 3).
5. **C.** Left 4, up 6. −4 means left 4 and 6 means up 6: Left 4, up 6.

Talk about it

Which way does a negative first number send you? Which way does a negative second number send you?

Home mission

Make the middle of a table «base camp.» Hide a coin by saying where it is. Use a pair like (−2, 1). Your student shows which way to move for each number. Then switch roles.

When they are stuck, ask

- Is the first number positive or negative? Does that mean left or right?
- Is the second number positive or negative? Does that mean up or down?
- We always start at the center, the origin. Put your finger there first.

Try not to say

- A negative sign just means the same direction, right and up.
- Ignore the negative signs and plot the point in Quadrant I.
- The order of the numbers does not matter anymore with negatives.