

## Activity 2: PICTURING INTEGERS

(Pictorial Action)

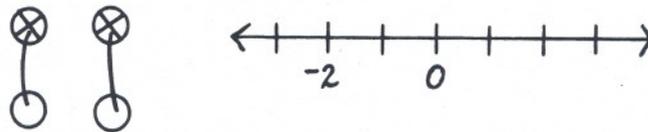
**Materials:** Paper  
Pencils

**Management:** Partners (30 minutes)

### Directions:

1. Have students draw a line segment, mark off steps on it, and label the middlemost mark as 0 (a number line without numerals except for 0).
2. Ask students to draw small circles with a large X inside each circle to represent negative integer amounts. Plain circles will represent positive integer amounts.
3. Have students draw circles for  $-2$ . Ask them to compare  $-2$  to 0 to show which number is greater. They should draw and match plain or positive circles to the 2 negative circles until 0 is reached; only 0-pairs will be present. Two plain circles will be needed; this shows that 0 is 2 more than  $-2$  or that  $-2$  increased by  $+2$  makes 0.
4. We will agree that larger numbers are to be written to the right of smaller numbers on

the numberline (a mathematical tradition). Have students find a mark on their numberline that can be labeled as  $-2$ . This mark needs to be 2 *steps* (or spaces) away from 0. Since  $-2 < 0$ , the selected mark also needs to be to the *left* of the 0 mark. Have students record " $-2 < 0$ " or " $0 > -2$ " on their own papers.



5. Have students repeat steps 3 and 4 with other randomly selected integers from  $-5$  to  $+5$ . Randomness is necessary to prevent students from just labeling marks without regard for the meaning of the numeral names. Each integer to be located on the line must be compared to 0. When comparing a positive integer to 0, plain (positive) circles will have to be added to 0 (the absence of circles) in order to make the positive integer. Hence, each positive integer will be greater than 0 and should be placed to the right of 0 on the numberline (steps away from 0 = number of plain circles added on).

