

# Concept Byte

Use With Lesson 1-5

ACTIVITY

## Always, Sometimes, or Never

© Common Core State Standards

Prepares for A-CED.A.3 Represent constraints by equations or inequalities . . .

MP 2

A statement can be always, sometimes, or never true. For each activity, work with a group of 4 students. Take turns predicting each answer. If the predictor gives a correct answer and explanation, he or she scores 1 point. Otherwise, the first person who proves the predictor incorrect scores 1 point. Whoever has the most points at the end of an activity wins.

### Activity 1

Is each description *always*, *sometimes*, or *never* true about the members of your group?

1. takes an algebra class
2. lives in your state
3. plays a musical instrument
4. is less than 25 years old
5. speaks more than one language
6. is taller than 5 m
7. has a sibling
8. plays basketball

### Activity 2

Suppose each member of your group takes one of the four cards at the right. Will a group member *always*, *sometimes*, or *never* have a number that fits each description?



9. greater than 2
10. greater than 25
11. even
12. irrational number
13. prime number
14. rational number
15. divisible by 2
16. less than 10

### Activity 3

Each member of your group substitutes any integer for  $x$  in each statement. Will a group member *always*, *sometimes*, or *never* have a true statement?

17.  $x - 2$  is greater than  $x$ .
18.  $|x|$  is less than  $x$ .
19.  $7 + x = x + 7$
20.  $13 - x = x - 13$
21.  $x + 0 = x$
22.  $-4 + (3 + x) = x + (-4 + 3)$
23.  $x \cdot 0 = 0$
24.  $|x|$  is greater than  $x$ .