5: Who Am I?

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Number of Students

Entire class

Materials

For group of students:
- Large Number Cards 1–30 (CD or teacher-made)

For the teacher:
- "Who Am I?" Cards (pages 110–113)

Overview

In this activity, a group of students form a number line. The teacher (or students) read number description cards. Students in the number line step forward when a number description card that matches their number is read. Seated students determine whether or not the student's number correctly matches the card description.

9

I am greater than 6.

Common Core State Standards

Content Standards:

Grade Level: K

Domain: Counting and Cardinality (CC)

Know number names and the count sequence.

1. Count to 100 by ones and by tens.

Practice Standards:

8. Look for and express regularity in repeated reasoning.

Kindergarten students are beginning to count. They are learning the number sequence, eventually counting to 100. They are discussing the ideas of "greater than" and "less than." Later, they learn about even and odd numbers and counting by twos.

◉ Presenting the Activity

1. Print the Large Number Cards 1–30 off the accompanying CD or write the numerals 1 to 30 on individual sheets of 8.5 × 11-in. paper.

2. Make a copy of the "Who Am I?" Cards and cut them apart.

3. Distribute consecutive Large Number Cards to the group of students selected to form the number line. Note: Initial activities generally start with 1–10 or 1–20. Later activities might use a sequence such as 15–30.

4. Say to students:

   > I want those of you who have a number card to arrange yourselves in a straight line, with the smallest number on the left.
   >
   > I (or student's name) will read a number description card.
   >
   > If you are that number, take a step forward. If not, stay in your place.
   >
   > Sometimes there will be more than one of you stepping forward.
   >
   > The rest of the class will decide if you are correct.

5. Continue with cards of a particular range of numbers. Then have students change roles, with those seated now forming a number line.

◉ Assessing Student Responses

The following questions will help you assess your students' responses to the activity:

• Did the students line up in the correct order for the activity? If not, which numbers caused problems?

• Did the students forming the number line recognize when their number was described and step forward? If not, which description cards caused problems?

• Did the students who remained seated determine the correct numbers from the number description cards?

34: I Have That Sum

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ⓘ Number of Students

Entire class

⊘ Materials

For each student:

- Basic Fact Cards (pages 147–152)

For teacher:

- Large Number Cards 1–10 or 1– 20 (CD or teacher-made)

◈ Overview

In this activity, students find the sums 1 to 20 and then line themselves up on a 1–10 or 1–20 number line on the floor.

Common Core State Standards

Content Standards:

Grade Level: K

Domain: Operations and Algebraic Thinking (OA)

Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.

1. Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations.

Grade Level: 1

Domain: Operations and Algebraic Thinking (OA)

Work with addition and subtraction equations.

8. Determine the unknown whole number in an addition or subtraction equation relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations $8 + ? = 11$, $5 = ? - 3$, $6 + 6 = ?$.

Practice Standards:

2. **Reason abstractly and quantitatively.**

   Students are learning to make sense of quantities and understand what addition means as they focus on basic addition facts.

6. **Attend to precision.**

   Students are accurately finding the sums for basic fact problems.

⬚ Presenting the Activity

1. Print the Large Number Cards off the accompanying CD or write the numerals 1 to 10 or 1 to 20 on individual sheets of 8.5 × 11-in. paper. Tape the cards to the floor in a line.

2. Make copies of the Basic Fact Cards and cut them apart.

3. Distribute a Basic Fact Card to each student

4. Say to students:

> 66 We are going to do an addition activity using the number line.
>
> Each one of you has a card that has an addition problem.
>
> I will call out a sum from 1 to 10 (or 1 to 20).
>
> If you have that sum, come up to the number line and stand on the sum.
>
> There may be several of you on a sum, so some of you will have to stand behind.
>
> Then each of you reads your card and gives the sum. For example, 3 + 2 = 5.

> I will continue until everyone in the class is standing on the number line.
>
> Then, I will ask you questions about the sums.

⦿ Assessing Student Responses

The following questions will help you assess your students' responses to the activity:

• Did students find the correct sums?

• Were any basic facts more difficult than others? For example, facts with 7, 8, and 9 are sometimes troublesome for students.

After all students are standing on the number line, have them quickly look at the number of students standing on each sum 1 to 10 (or 1 to 20).

• Which sums have the most students on them? The least students? Explain why.

After they have gone back to their seats, have students work in pairs to make a table of sums showing the occurrences:

2	3	4	5	6	7	8	9	10
1 + 1	1 + 2	1 + 3	1 + 4	1 + 5	1 + 6	1 + 7	1 + 8	1 + 9
	2 + 1	2 + 2	2 + 3	2 + 4	2 + 5	2 + 6	2 + 7	2 + 8
		3 + 1	3 + 2	3 + 3	3 + 4	3 + 5	3 + 6	3 + 7
			4 + 1	4 + 2	4 + 3	4 + 4	4 + 5	4 + 6
				5 + 1	5 + 2	5 + 3	5 + 4	5 + 5
					6 + 1	6 + 2	6 + 3	6 + 4
						7 + 1	7 + 2	7 + 3
							8 + 1	8 + 2
								9 + 1

Point out that for each sum, the number of ways to get that sum is one more than the number. For example, for a sum of 3, there are 4 ways; for a sum of 7, there are 8 ways.

36: Forward or Back

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(i) Number of Students
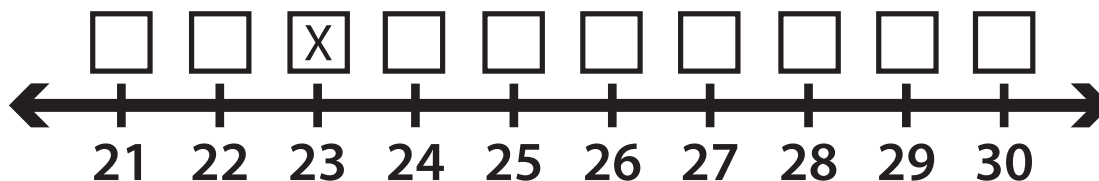
Pairs

(✎) Materials

For each student:

- 0–30 Number Line (page 91)
- "Forward or Back" Cards (pages 160–162)
- Pencil

> **10 more than 13**

(◈) Overview

In this game, two students count forward or backward to determine the answer to a problem stated on a problem card.

		X							
21	22	23	24	25	26	27	28	29	30

Common Core State Standards

Content Standards:

Grade Level: 1

Domain: Number and Operations in Base Ten (NBT)

Extend the counting sequence.

1. Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.

Practice Standards:

2. Reason abstractly and quantitatively.

First-grade students are beginning to make sense of quantities. They now start at any number to count forward or backward, rather than starting at 1. They are beginning to focus on quantitative reasoning

⬛ Presenting the Activity

1. Make a copy of the "Forward or Back" Cards on card stock for each student and cut the cards apart.

2. Make a copy of the 0–30 Number Line for each student, cut the sections apart, and glue or tape them together to form a continuous number line.

3. Distribute a 0–30 Number Line and a deck of "Forward or Back" Cards to each student.

4. Say to students:

   > In this game, you each have a number line and a deck of "Forward or Back" cards. Turn your cards face down in a pile.
   >
   > To begin, each of you turns over a card at the same time. Read the card and determine the number being described.
   >
   > For example, suppose you turn over a card that says "5 more than 15." What number is 5 more than 15? (20)
   >
   > Next, go to your number line and make an "X" in the box above 20.
   >
   > When you have finished the round, both of you place your card on the bottom of your pile.
   >
   > Now you play again. Turn over a card at the same time, find the answer, and mark it on your number line.
   >
   > Continue playing until one of you crosses out five numbers in a row on your number line—for example, 10, 11, 12, 13, 14.

5. Play a variation of the game by having students play on the same number line. The winner is the player who covers three consecutive numbers.

✓ Assessing Student Responses

The following questions will help you assess your students' responses to the activity:

- Did the students correctly identify the greater (lesser) number?

- Did the students correctly locate the number and cross it out on the number line?

"Who Am I?" Cards

I am 3.

I am 8.

I am less than 5.

I am less than 14.

I am less than 10.

I am less than 2.

I am 17.

I am 22.

"Who Am I?" Cards

I am greater than 6.

I am greater than 12.

I am greater than 15.

I am greater than 3.

I am greater than 9.

I am greater than 27.

I am greater than 20.

I am greater than 4.

"Who Am I?" Cards

I am greater than 4 and less than 7.

I am greater than 8 and less than 12.

I am greater than 15 and less than 17.

I am greater than 20 and less than 25.

I am greater than 13 and less than 15.

I am greater than 5 and less than 8.

I am greater than 23 and less than 30.

I am greater than 17 and less than 21.

I am an even number.

I am an even number less than 6.

I am an even number less than 19.

I am an even number less than 16.

I am an odd number less than 15.

I am an odd number less than 28.

I am an odd number greater than 3.

I am an odd number greater than 14.

Basic Fact Cards

0 + 1	0 + 2	0 + 3	0 + 4
0 + 5	0 + 6	0 + 7	0 + 8
0 + 9	0 + 10	1 + 1	1 + 2
1 + 3	1 + 4	1 + 5	1 + 6
1 + 7	1 + 8	1 + 9	1 + 10

Basic Fact Cards

2 + 1	**2 + 2**	**2 + 3**	**2 + 4**
2 + 5	**2 + 6**	**2 + 7**	**2 + 8**
2 + 9	**2 + 10**	**3 + 1**	**3 + 2**
3 + 3	**3 + 4**	**3 + 5**	**3 + 6**
3 + 7	**3 + 8**	**3 + 9**	**3 + 10**

Basic Fact Cards

4 + 1	**4 + 2**	**4 + 3**	**4 + 4**
4 + 5	**4 + 6**	**4 + 7**	**4 + 8**
4 + 9	**4 + 10**	**5 + 1**	**5 + 2**
5 + 3	**5 + 4**	**5 + 5**	**5 + 6**
5 + 7	**5 + 8**	**5 + 9**	**5 + 10**

Basic Fact Cards

6 + 1	6 + 2	6 + 3	6 + 4
6 + 5	6 + 6	6 + 7	6 + 8
6 + 9	6 + 10	7 + 1	7 + 2
7 + 3	7 + 4	7 + 5	7 + 6
7 + 7	7 + 8	7 + 9	7 + 10

Basic Fact Cards

8 + 1	**8 + 2**	**8 + 3**	**8 + 4**
8 + 5	**8 + 6**	**8 + 7**	**8 + 8**
8 + 9	**8 + 10**	**9 + 1**	**9 + 2**
9 + 3	**9 + 4**	**9 + 5**	**9 + 6**
9 + 7	**9 + 8**	**9 + 9**	**9 + 10**

Basic Fact Cards

10 + 1	**10 + 2**	**10 + 3**	**10 + 4**
10 + 5	**10 + 6**	**10 + 7**	**10 + 8**
10 + 9	**10 + 10**	**1 + 0**	**2 + 0**
3 + 0	**4 + 0**	**5 + 0**	**6 + 0**
7 + 0	**8 + 0**	**9 + 0**	**10 + 0**

"Forward or Back" Cards

3 less than 13	**2 more than 25**
9 less than 30	**8 more than 8**
4 more than 2	**2 less than 11**
10 more than 13	**8 less than 21**

"Forward or Back" Cards

4 less than 12	**3 more than 27**
10 less than 13	**9 more than 13**
9 less than 16	**8 more than 6**
6 less than 11	**5 more than 24**

"Forward or Back" Cards

8 less than 10	**10 more than 17**
5 less than 11	**7 more than 14**
10 less than 11	**9 more than 9**
7 less than 11	**6 more than 18**