Lesson Maker Pro

Whole Numbers as Fractions

Use bars and number lines to show that equal parts can make whole numbers.

NY-3.NF.3.c Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers.

NAME _____ **DATE** _____

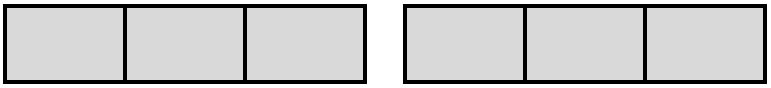
Part 1 - Read Bar Models

Listen as your teacher reads the directions. A denominator tells how many equal parts are in **one whole**. Each outlined long rectangle below is 1 whole. All of its equal parts are shaded. Count the parts and write the fraction that names the whole amount.

1. Fraction: ____ / 6



2. Fraction: ____ / 3



3. Fraction: ____ / 2

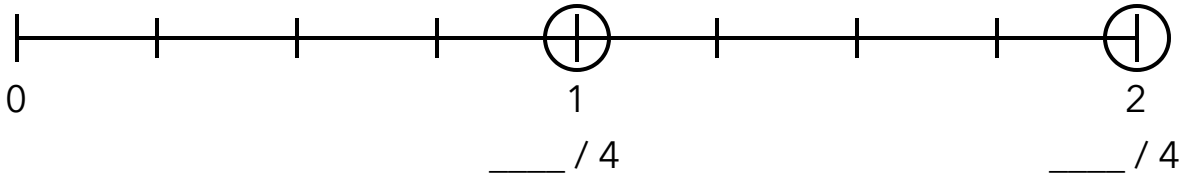


Each outlined rectangle is one whole.

Check: Does your denominator match the number of equal parts in one outlined rectangle?

Part 2 - Number Lines and Your Models

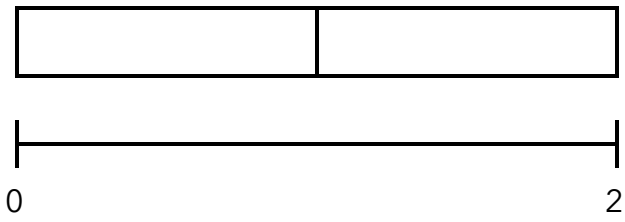
4. This number line shows 2 wholes. Each whole is split into 4 equal parts. Write a fraction with denominator 4 at each circled point.



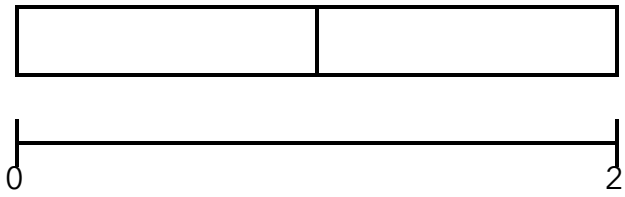
_____ / 4 _____ / 4

5. Show 2 wholes in two ways. In each row, divide **each** bar into equal parts, shade all parts, and add equal tick marks on the number line. Then write the fraction for 2.

Halves: 2 = _____ / 2



Thirds: 2 = _____ / 3



6. Explain why _____ / 2 and _____ / 3 are equivalent.

Answer Key and Teaching Notes

Answers
1. 6/6. There are 6 equal parts in 1 whole, and all 6 parts are shown.
2. 6/3. There are 2 complete wholes, each split into 3 equal parts: 2 x 3 = 6 parts.
3. 6/2. There are 3 complete wholes, each split into 2 equal parts: 3 x 2 = 6 parts.
4. Left circled point: 4/4. Right circled point: 8/4.
5. Halves: 4/2. Student bar should show two outlined wholes, each divided into 2 equal parts, with all 4 parts shaded. Student number line should have equal half-unit intervals from 0 to 2. Thirds: 6/3. Student bar should show two outlined wholes, each divided into 3 equal parts, with all 6 parts shaded. Student number line should have equal one-third intervals from 0 to 2.
6. Sample response: "4/2 and 6/3 both equal 2. Four halves make two whole bars, and six thirds make the same two whole bars." Accept equivalent language that identifies the same quantity and connects the denominators to equal parts per whole.

Materials and setup
Supplied: student bar models, number lines, blank labeling areas, and explanation lines. **Additionally needed:** pencils, crayons or shaded pencils, and optional fraction strips or equal-size paper rectangles. Print and supply all student pages, keeping teacher-key pages separate. If using manipulatives, give each pair equal-size wholes that can be partitioned into halves, thirds, fourths, and sixths. Do not mix differently sized "wholes."

Teaching script
Say: "A fraction names equal parts of one whole. The bottom number tells how many equal parts are in one whole. The top number tells how many of those parts we have." Point to one outlined rectangle in Item 1 and say: "Count the equal parts in this one whole first." Then say: "When we have more than one whole, keep the same-size parts. We may have more parts than the denominator, and the fraction can still name a whole number." Before Item 5, say: "Your bar and your number line must tell the same story about 2 wholes."

Observation method
During Items 2, 4, and 5, listen for students counting parts per one whole before counting all parts. Check that a student uses equal-sized partitions within every whole, keeps the denominator consistent across the two whole units, and makes equal intervals on the number line. For Item 6, record whether the student states that both fractions equal 2 and gives a model-based reason. Prompt only with: "What does the denominator tell you?" Do not supply the numerator.

Rubric: Check Items 1-4, both bar and number-line models in Item 5, and an equal-value explanation in Item 6. If confused, ask the student to identify one whole before counting its equal parts.

Standard: NY-3.NF.3.c. https://lessonmakerpro.com/standards/ny-nextgen-math/ny-3-nf-3-c