LESSON MAKER PRO

Fraction Build-Up

Build each fraction with equal unit parts.

GRADE 3 · MA.3.FR.1.2

MA.3.FR.1.2 "Represent and interpret fractions, including fractions greater than one, in the form of mn as the result of adding the unit fraction 1n to itself m times."

NAME _____ DATE _____

BUILD WITH UNIT FRACTIONS

The bottom number tells the size of each unit fraction. The top number tells how many of those unit fractions to add. You can use this rule for fractions less than one or greater than one.

WORKED EXAMPLE

Write the shaded 5/6 as a sum of unit fractions.

One whole 

1. Each part is 1/6 of one whole.
2. Five shaded parts give five copies of 1/6.

Answer: 5/6 = 1/6 + 1/6 + 1/6 + 1/6 + 1/6

PRACTICE 6 problems

1 Write 3/4 as a sum of unit fractions.

ANSWER _____

2 Complete: 1/6 + 1/6 + 1/6 + 1/6 = ___.

ANSWER _____

3 Write 8/3 as a sum of unit fractions.

ANSWER _____

_____

4 Which fraction is 1/8 added 2 times?

ANSWER _____

5 Write 11/8 as a sum of unit fractions.

ANSWER _____

_____

6 How many times is 1/10 added to make 13/10?

ANSWER _____

APPLY IT Show your work

1 Kai travels 14/8 of a lap. Each blank bar is one whole lap split into eighths. Shade 14 copies of 1/8, then write the repeated-addition sentence. Explain why the distance is greater than one lap.

One lap | | | | | | | | |

One lap | | | | | | | | |

2 A coding robot moves 11/6 meter. Each small move is 1/6 meter. How many small moves does the robot make? Write an addition sentence to show your thinking.

CHALLENGE One step up

A student says, "9/3 = 1/3 + 1/3 + 1/3." Is the student correct? Explain the error and write the correct addition sentence.

WORK SPACE AND ANSWER

ANSWER KEY

Fraction Build-Up

GRADE 3 · MA.3.FR.1.2

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Write 3/4 as a sum of unit fractions.	**3/4 = 1/4 + 1/4 + 1/4**
2	Complete: 1/6 + 1/6 + 1/6 + 1/6 = ___.	**4/6**
3	Write 8/3 as a sum of unit fractions.	**8/3 = 1/3 + 1/3 + 1/3 + 1/3 + 1/3 + 1/3 + 1/3 + 1/3**
4	Which fraction is 1/8 added 2 times?	**2/8**
5	Write 11/8 as a sum of unit fractions.	**11/8 = 1/8 + 1/8 + 1/8 + 1/8 + 1/8 + 1/8 + 1/8 + 1/8 + 1/8 + 1/8 + 1/8**
6	How many times is 1/10 added to make 13/10?	**13 times**

PART 2 · APPLY IT

1. **14/8 = 1/8 + 1/8 + 1/8 + 1/8 + 1/8 + 1/8 + 1/8 + 1/8 + 1/8 + 1/8 + 1/8 + 1/8 + 1/8 + 1/8; shade all 8 parts of one bar and 6 of the other. Fourteen eighths is more than the eight eighths in one lap.** The unit fraction is 1/8 because the track is marked in eighths. Add 1/8 fourteen times. Require fourteen shaded eighths across same-size whole-lap bars and exactly fourteen 1/8 addends.
2. **11 small moves; 11/6 = 1/6 + 1/6 + 1/6 + 1/6 + 1/6 + 1/6 + 1/6 + 1/6 + 1/6 + 1/6 + 1/6** Each small move is 1/6 meter. The numerator shows that the robot makes eleven moves of 1/6 meter.

CHALLENGE

No. The student added 1/3 only 3 times, which equals 3/3. 9/3 = 1/3 + 1/3 + 1/3 + 1/3 + 1/3 + 1/3 + 1/3 + 1/3 + 1/3.

Accept repeated-addition sentences with the correct unit fraction and exactly the number of addends shown by the numerator. Do not require students to simplify fractions, since the goal is to show the given numerator and denominator.