

4.NF Expanded Fractions and Decimals

Alignments to Content Standards: 4.NF.C.5 4.NF.C.6

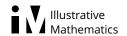
Task

Complete the table.

$43\frac{65}{100}$	$40 + 3 + \frac{6}{10} + \frac{5}{100}$	40 + 3 + 0.6 + 0.05	43.65
$21\frac{90}{100}$			
$40\frac{76}{100}$			
$7\frac{82}{100}$			
$18\frac{3}{100}$			

IM Commentary

The purpose of this task is for students to show they understand the connection between fraction and decimal notation by writing the same numbers both ways. Comparing and contrasting the two solutions shown below shows why decimal notation can be confusing. The first solution shows the briefest way to represent each



number, and the second solution makes all the zeros explicit.

Solutions

Edit this solution

Solution: Supressing unnecessary zeros

$43\frac{65}{100}$	$40 + 3 + \frac{6}{10} + \frac{5}{100}$	40 + 3 + 0.6 + 0.05	43.65
$21\frac{90}{100}$	$20 + 1 + \frac{9}{10}$	20 + 1 + 0.9	21.9
$40\frac{76}{100}$	$40 + \frac{7}{10} + \frac{6}{100}$	40 + 0.7 + 0.06	40.76
$7\frac{82}{100}$	$7 + \frac{8}{10} + \frac{2}{100}$	7 + 0.8 + 0.02	7.82
$18\frac{3}{100}$	$10 + 8 + \frac{3}{100}$	10 + 8 + 0.03	18.03

Edit this solution

Solution: Keeping all zeros

$43\frac{65}{100}$	$40 + 3 + \frac{6}{10} + \frac{5}{100}$	40 + 3 + 0.6 + 0.05	43.65
$21\frac{90}{100}$	$20 + 1 + \frac{9}{10} + \frac{0}{100}$	20 + 1 + 0.9 + 0.00	21.90
$40\frac{76}{100}$	$40 + 0 + \frac{7}{10} + \frac{6}{100}$	40 + 0 + 0.7 + 0.06	40.76
$7\frac{82}{100}$	$0 + 7 + \frac{8}{10} + \frac{2}{100}$	0 + 7 + 0.8 + 0.02	7.82
$18\frac{3}{100}$	$10 + 8 + \frac{0}{10} + \frac{3}{100}$	10 + 8 + 0.0 + 0.03	18.03





4.NF Expanded Fractions and Decimals Typeset May 4, 2016 at 18:45:38. Licensed by Illustrative Mathematics under a Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License .