

Relate Mixed Numbers and Decimals

You can convert a mixed number to a decimal

STEP 1 Convert the mixed number to a fraction

STEP 2 Convert the fraction to a decimal

Write $2\frac{2}{5}$ as a decimal.

$$\frac{2}{5} = \frac{4}{10} = 0.4$$

$$\text{So, } 2\frac{2}{5} = 2.4$$

You can convert a decimal number to a mixed number if the decimal number is greater than 1.

STEP 1 break down the decimal number into a whole part and a decimal part

STEP 2 count the number of digits after the decimal points

STEP 3 Multiply the decimal part by multiples of ten up and down to get rid of the decimal point

Step 4 Simplify the fractional part of the mixed number

Write 4.055 as a mixed number.

Read 4.055 as "4 and 55 thousandths."

The whole part is 4 and the decimal part is 0.055

You have three numbers after the decimal point so we will multiply up and down by 1000

$$0.055 = 0.055 \times 1 = 0.055 \times \frac{1000}{1000} = \frac{0.055 \times 1000}{1000} = \frac{55}{1000}$$

$$4.055 = 4 \frac{55}{1,000}$$

Write the mixed number in simplest form.

$$\text{So, } 4.055 = 4 \frac{55}{1,000} = 4 \frac{11}{200}$$

Examples:**A- Write an equivalent mixed number.**

1) 2.3

$$2.3 = 2 + 0.3 = 2 + \frac{0.3 \times 10}{10} = 2 \frac{3}{10}$$

2) 4.12

$$0.12 = \frac{0.12 \times 100}{100} = \frac{12}{100} = \frac{3}{25}$$

$$4.12 = 4 \frac{3}{25}$$