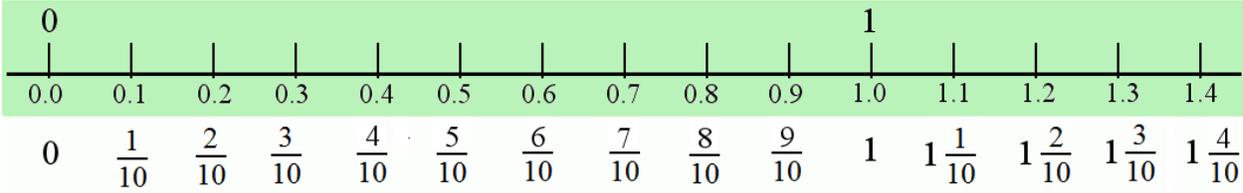


Converting between Fractions and Decimals

PART A: Converting Fractions to Decimals

All fractions (proper, improper and mixed) can be converted to a decimal number.

<p>To convert a proper or improper fraction to a decimal, divide the numerator by the denominator.</p> <p>Note: proper fractions (and the decimal equivalents) are always greater than zero but less than 1.</p> <p>Improper fractions (and the decimal equivalents) are always greater than 1.</p>	<p>Examples:</p> $\frac{3}{10} = 3 \div 10 = 0.3$ $\frac{17}{10} = 17 \div 10 = 1.7$
<p>To convert a mixed number to a decimal, divide the numerator by the denominator of the fraction part and add the whole part.</p> <p>Note: Mixed numbers (and the decimal equivalents) are always greater than 1.</p>	$1\frac{40}{100} = 1 + (40 \div 100) = 1.4$
	

1. Convert the following fractions to a decimal number.

- | | |
|--|--|
| a) $\frac{5}{6}$ (to the nearest hundredth) = | f) $\frac{85}{70}$ (to the nearest hundredth) = |
| b) $3\frac{7}{8}$ (to the nearest hundredth) = | g) $\frac{48}{16}$ (exactly) = |
| c) $\frac{1}{25}$ (exactly) = | h) $5\frac{4}{4}$ (exactly) = |
| d) $\frac{7}{2}$ (exactly) = | i) $\frac{72}{13}$ (to the nearest thousandth) = |
| e) $4\frac{1}{3}$ (to the nearest hundredth) = | j) $38\frac{19}{20}$ (exactly) = |

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PART B: Converting Decimals to Fractions

All decimals can be converted to a fraction and/or mixed number.

1.	Write the decimal as a fraction with a denominator of 1.	Examples:		
		$0.3 = \frac{0.3}{1}$	$0.96 = \frac{0.96}{1}$	$2.35 = \frac{2.35}{1}$
2.	Multiply the numerator and denominator by a power of ten to make the decimal a whole number.	$\frac{0.3}{1} \cdot \frac{10}{10} = \frac{3}{10}$	$\frac{0.96}{1} \cdot \frac{100}{100} = \frac{96}{100}$	$\frac{2.35}{1} \cdot \frac{100}{100} = \frac{235}{100}$
3.	Reduce if possible. Remember to change all improper fractions to a mixed number.	<i>Cannot be reduced</i>	$\frac{96}{100} = \frac{24}{25}$	$\frac{235}{100} = \frac{47}{20}$ $\frac{47}{20} = 2\frac{7}{20}$

2. Convert the following decimals to a fraction.

a) $0.79 =$

f) $2.008 =$

b) $1.05 =$

g) $0.02 =$

c) $0.083 =$

h) $19.3 =$

d) $15.34 =$

i) $0.005 =$

e) $100.6 =$

j) $34.54 =$

3. Solve using long division and write the final answer as a fraction.

a) $5634 \div 25 =$

c) $78523 \div 50 =$

b) $96451 \div 13 =$

d) $10432 \div 89 =$

Converting between Fractions and Decimals

SOLUTIONS:

1. Convert the following fractions to a decimal number.

- a) $\frac{5}{6}$ (to the nearest hundredth) = **0.83** f) $\frac{85}{70}$ (to the nearest hundredth) = **1.21**
b) $3\frac{7}{8}$ (to the nearest hundredth) = **3.88** g) $\frac{48}{16}$ (exactly) = **3**
c) $\frac{1}{25}$ (exactly) = **0.04** h) $5\frac{4}{4}$ (exactly) = **6**
d) $\frac{7}{2}$ (exactly) = **3.5** i) $\frac{72}{13}$ (to the nearest thousandth) = **5.54**
e) $4\frac{1}{3}$ (to the nearest hundredth) = **4.33** j) $38\frac{19}{20}$ (exactly) = **38.95**

2. Convert the following decimals to a fraction. Reduce where possible.

- a) $0.79 = \mathbf{79/100}$ f) $2.008 = \mathbf{2\ 1/125}$
b) $1.05 = \mathbf{1\ 1/20}$ g) $0.02 = \mathbf{1/50}$
c) $0.083 = \mathbf{83/1000}$ h) $19.3 = \mathbf{19\ 3/100}$
d) $15.34 = \mathbf{15\ 17/50}$ i) $0.005 = \mathbf{1/200}$
e) $100.6 = \mathbf{100\ 3/5}$ j) $34.54 = \mathbf{34\ 27/50}$

3. Solve using long division and write the final answer as a fraction.

- a) $5634 \div 25 = \mathbf{225\ 4/25}$ c) $78523 \div 50 = \mathbf{157\ 23/50}$
b) $96451 \div 13 = \mathbf{7419\ 4/13}$ d) $10432 \div 89 = \mathbf{117\ 19/89}$