

Writing fractions as decimals 12/10

fractions really just mean divide

So... $\frac{1}{2} = 1 \div 2$ $2 \overline{) 1.0}$ $\begin{array}{r} 0.5 \\ -1.0 \\ \hline \end{array}$ 0.5 Terminating

$\frac{1}{3} = 1 \div 3$ $3 \overline{) 1.00}$ $\begin{array}{r} 0.333 \\ -9 \\ \hline 10 \\ -9 \\ \hline \end{array}$ 0. $\overline{3}$ Repeating

2 types of decimals:

- ① Terminating (decimal ends) ex) 0.5 0.125
0.75
- ② Repeating (Written using Bar Notation) ex) 0.3333... 0. $\overline{3}$
0.13333... 0.1 $\overline{3}$
0.131313... 0.1 $\overline{3}$

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Practice using Calc.

Example	Steps	
$\frac{5}{6}$ 0.8333... 0.8 $\overline{3}$ Repeating	$5 \div 6$ OR 5 abc 6 2 nd ←	on own: ① $\frac{3}{5} = 0.6$ Term.. ② $\frac{4}{9} = 0.\overline{4}$ Repeating ③ $\frac{8}{13} = .\overline{615384}$ Rep

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What about Mixed #s?

Example	Steps
<p>Terminating $2\frac{3}{4} = 2.75$</p> <p>$2\frac{3}{4} = \frac{11}{4}$</p> <p>$2.75$</p> <p>$4 \overline{) 11.00}$</p> <p>$\underline{-8}$</p> <p>$30$</p> <p>$\underline{-28}$</p> <p>$20$</p> <p>$\underline{-20}$</p> <p>$0$</p>	<p>$2 \text{ abc } 3 \text{ abc } 4$</p> <p>$\cdot 2^{\text{nd}}$ ←</p> <p>OR</p> <p>Make it an improper fraction & divide ($11 \div 4$)</p>

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What if I have negatives?

$$-\frac{3}{4} = -0.75$$

$$-3 \div 4$$

$$\left(\begin{array}{l} 3 \text{ abc } 4 \text{ + } (-) \\ 2^{\text{nd}} \leftarrow \end{array} \right)$$

$$-\frac{5}{8} = -0.625 \quad \text{Terminating}$$

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Decimals to Fractions:

$$\textcircled{1} \quad 0.125 = \frac{1}{8}$$

2nd ←

$$\frac{125 \div 25}{1000 \div 25} = \frac{5 \div 5}{40 \div 5} = \frac{1}{8}$$

$$\textcircled{2} \quad -5.82 = -5 \frac{41}{50} \Rightarrow -5 \frac{82 \div 2}{100 \div 2} = -5 \frac{41}{50}$$

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