Math Antics®
Worksheets

Converting Any Fraction to a Decimal (by Dividing)

Instructions: Use 'decimal division' to convert these fractions into decimal values. These all have non-repeating digits. Be sure to show your work!

1 $\dfrac{2}{5}$ = ___0.4___

2 $\dfrac{1}{4}$ = _____

$$\begin{array}{r} 0.4 \\ 5\overline{)2.0} \\ -\underline{2\,0} \\ 0 \end{array}$$

3 $\dfrac{3}{4}$ = _____

4 $\dfrac{3}{8}$ = _____

5 $\dfrac{1}{8}$ = _____

6 $\dfrac{5}{8}$ = _____

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Repeating Decimals from Fractions

Instructions: Use 'decimal division' to convert these fractions into decimal values. These all have repeating digits. Be sure to show your work!

Example

$\dfrac{1}{6} =$ _0.1$\overline{6}$_

$$\begin{array}{r} 0.166 \\ 6\overline{)1.000} \\ -\ 6 \\ \hline 40 \\ -\ 36 \\ \hline 40 \\ -\ 36 \\ \hline 4 \end{array}$$

same pattern in division means a repeating decimal

1 $\quad \dfrac{1}{9} =$ _____

2 $\quad \dfrac{5}{9} =$ _____

3 $\quad \dfrac{5}{12} =$ _____

4 $\quad \dfrac{3}{11} =$ _____

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Long Repeating Decimals from Fractions

Instructions: Use 'decimal division' to convert these fractions into decimal values. These all have long decimal parts, so **round off** to **three** decimal places. Be sure to show your work!

Example $\dfrac{1}{7} =$ __0.143__

$$
\begin{array}{r}
0.1428 \\
7\overline{)1.0000} \\
-\underline{7} \\
30 \\
-\underline{28} \\
20 \\
-\underline{14} \\
60 \\
56 \\
\end{array}
$$

let's just stop here and round off our answer

1 $\dfrac{3}{7} =$ _____

2 $\dfrac{6}{7} =$ _____

3 $\dfrac{5}{13} =$ _____

4 $\dfrac{2}{17} =$ _____

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Name: _____

Date: _____
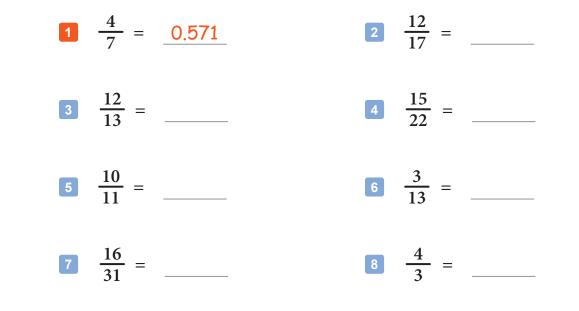
Converting with a Calculator

Instructions: The following fractions have been converted to decimals with a calculator. Round the answers off to **three** decimal places or use the repeat symbol to shorten the answer if you see a repeating pattern.

1 $\dfrac{2}{7}$ = 0.2857142... = _0.286_

2 $\dfrac{7}{9}$ = 0.7777777... = _$0.\overline{7}$_

3 $\dfrac{15}{21}$ = 0.7142857... = _____

4 $\dfrac{19}{33}$ = 0.5757575... = _____

5 $\dfrac{9}{14}$ = 0.6428571... = _____

6 $\dfrac{9}{23}$ = 0.3913043... = _____

7 $\dfrac{8}{11}$ = 0.7272727... = _____

8 $\dfrac{6}{19}$ = 0.3157894... = _____

9 $\dfrac{7}{22}$ = 0.3181818... = _____

10 $\dfrac{11}{12}$ = 0.9166666... = _____

Instructions: Use a calculator to convert these fractions to decimals. Round off to **three** decimal places or use the repeat symbol if you see a repeating pattern.

1 $\dfrac{4}{7}$ = _0.571_

2 $\dfrac{12}{17}$ = _____

3 $\dfrac{12}{13}$ = _____

4 $\dfrac{15}{22}$ = _____

5 $\dfrac{10}{11}$ = _____

6 $\dfrac{3}{13}$ = _____

7 $\dfrac{16}{31}$ = _____

8 $\dfrac{4}{3}$ = _____

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