

You can use a calculator for this. (You will want one.)

Convert each fraction to a decimal.

For your answer, type a zero, then a decimal point, then the next 12 digits.

Questions will start on the next page.

Jul 13-1:21 PM

You can use a calculator for this. (You will want one.)

Convert each fraction to a decimal.

For your answer, type a zero, then a decimal point, then the next 12 digits.

1 $\frac{5}{9} =$ _____

Jul 13-1:21 PM

You can use a calculator for this. (You will want one.)

Convert each fraction to a decimal.

For your answer, type a zero, then a decimal point, then the next 12 digits.

2 $\frac{2}{9} =$ _____



Jul 13-1:21 PM

You can use a calculator for this. (You will want one.)

Convert each fraction to a decimal.

For your answer, type a zero, then a decimal point, then the next 12 digits.

3 $\frac{6}{9} =$ _____

Jul 13-1:21 PM

Find a fraction that would convert to this decimal.

For your answer, type the numerator, then the fraction bar, then the denominator.

4 $\frac{\quad}{\quad} = 0.\overline{8}$

Jul 13-1:21 PM

You can use a calculator for this. (You will want one.)

Convert each fraction to a decimal.

For your answer, type a zero, then a decimal point, then the next 12 digits.

5 $\frac{43}{99} = \underline{\hspace{2cm}}$

Jul 13-1:21 PM

You can use a calculator for this. (You will want one.)

Convert each fraction to a decimal.

For your answer, type a zero, then a decimal point, then the next 12 digits.

6 $\frac{17}{99} =$ _____

Jul 13-1:21 PM

You can use a calculator for this. (You will want one.)

Convert each fraction to a decimal.

For your answer, type a zero, then a decimal point, then the next 12 digits.

7 $\frac{85}{99} =$ _____

Jul 13-1:21 PM

Find a fraction that would convert to this decimal.

For your answer, type the numerator, then the fraction bar, then the denominator.

8 _____ = $0.\overline{61}$

Jul 13-1:21 PM

You can use a calculator for this. (You will want one.)

Convert each fraction to a decimal.

For your answer, type a zero, then a decimal point, then the next 12 digits.

9 $\frac{261}{999} =$ _____

Jul 13-1:21 PM

You can use a calculator for this. (You will want one.)

Convert each fraction to a decimal.

For your answer, type a zero, then a decimal point, then the next 12 digits.

10 $\frac{592}{999} =$ _____

Jul 13-1:21 PM

You can use a calculator for this. (You will want one.)

Convert each fraction to a decimal.

For your answer, type a zero, then a decimal point, then the next 12 digits.

11 $\frac{678}{999} =$ _____

Jul 13-1:21 PM

Find a fraction that would convert to this decimal.

For your answer, type the numerator, then the fraction bar, then the denominator.

12 _____ = $0.\overline{614}$

Jul 13-1:21 PM

Find a fraction that would convert to this decimal.

For your answer, type the numerator, then the fraction bar, then the denominator.

13 _____ = $0.\overline{2375}$

Jul 13-1:21 PM

Find a fraction that would convert to this decimal.

For your answer, type the numerator, then the fraction bar, then the denominator.

14 _____ = $0.\overline{123456}$

Jul 13-1:21 PM

15 True or False: Any repeating decimal can be written as a fraction (with whole-number numerator and denominator).

True

False

Jul 13-1:56 PM

$$\begin{aligned} & 56.91\overline{248} \\ &= 56.91 + 0.00\overline{248} \\ &= 56.91 + \overline{0.248} \div 100 \\ &= \frac{5691}{100} + \frac{248}{999} \times \frac{1}{100} \\ &= \frac{5691 \times 999}{100 \times 999} + \frac{248}{99900} \\ &= \frac{5685309}{99900} + \frac{248}{99900} \\ &= \frac{5685557}{99900} \end{aligned}$$

Jul 13-1:58 PM

16 True or False: Every repeating decimal is also a fraction (with whole-number numerator and denominator).

True

False

Jul 13-1:56 PM

Working without a calculator, when do we know for certain that $3/7$ repeats?

$$\begin{array}{r} 0.? \\ 7 \overline{)3.000000000000} \end{array}$$

17

Jul 13-2:56 PM

Working without a calculator, when do we know for certain that $3/7$ repeats?

$$\begin{array}{r} 0.4 \\ 7 \overline{)3.000000000000} \\ ? \end{array}$$

18

Don't include the decimal in your answer.

Jul 13-2:56 PM

Working without a calculator, when do we know for certain that $3/7$ repeats?

19

$$\begin{array}{r} 0.4 \\ 7 \overline{)3.000000000000} \\ \underline{28} \\ ? \end{array}$$

Jul 13-2:56 PM

Working without a calculator, when do we know for certain that $3/7$ repeats?

20

$$\begin{array}{r} 0.4? \\ 7 \overline{)3.000000000000} \\ \underline{28} \\ 20 \end{array}$$

Jul 13-2:56 PM

Working without a calculator, when do we know for certain that $3/7$ repeats?

21

$$\begin{array}{r} 0.42 \\ 7 \overline{)3.000000000000} \\ \underline{28} \\ 20 \\ \end{array}$$

?

Jul 13-2:56 PM

Working without a calculator, when do we know for certain that $3/7$ repeats?

22

$$\begin{array}{r} 0.42 \\ 7 \overline{)3.000000000000} \\ \underline{28} \\ 20 \\ \underline{14} \\ \end{array}$$

?

Jul 13-2:56 PM

Working without a calculator, when do we know for certain that $3/7$ repeats?

23

$$\begin{array}{r}
 0.42? \\
 \hline
 7 \overline{) 3.000000000000} \\
 \underline{28} \\
 20 \\
 \underline{14} \\
 60
 \end{array}$$

Jul 13-2:56 PM

Working without a calculator, when do we know for certain that $3/7$ repeats?

24

$$\begin{array}{r}
 0.428 \\
 \hline
 7 \overline{) 3.000000000000} \\
 \underline{28} \\
 20 \\
 \underline{14} \\
 60 \\
 ?
 \end{array}$$

Jul 13-2:56 PM

Working without a calculator, when do we know for certain that $3/7$ repeats?

25

$$\begin{array}{r}
 0.428 \\
 \hline
 7 \overline{) 3.000000000000} \\
 \underline{28} \\
 20 \\
 \underline{14} \\
 60 \\
 \underline{56} \\
 ?
 \end{array}$$

Jul 13-2:56 PM

Working without a calculator, when do we know for certain that $3/7$ repeats?

26

$$\begin{array}{r}
 0.428? \\
 \hline
 7 \overline{) 3.000000000000} \\
 \underline{28} \\
 20 \\
 \underline{14} \\
 60 \\
 \underline{56} \\
 40
 \end{array}$$

Jul 13-2:56 PM

Working without a calculator, when do we know for certain that $3/7$ repeats?

27

$$\begin{array}{r}
 0.4285 \\
 \hline
 7 \overline{) 3.000000000000} \\
 \underline{28} \\
 20 \\
 \underline{14} \\
 60 \\
 \underline{56} \\
 40 \\
 \text{?}
 \end{array}$$

Jul 13-2:56 PM

Working without a calculator, when do we know for certain that $3/7$ repeats?

28

$$\begin{array}{r}
 0.4285 \\
 \hline
 7 \overline{) 3.000000000000} \\
 \underline{28} \\
 20 \\
 \underline{14} \\
 60 \\
 \underline{56} \\
 40 \\
 \underline{35} \\
 \text{?}
 \end{array}$$

Jul 13-2:56 PM

Working without a calculator, when do we know for certain that $3/7$ repeats?

29

$$\begin{array}{r}
 0.4285? \\
 \hline
 7 \overline{) 3.000000000000} \\
 \underline{28} \\
 20 \\
 \underline{14} \\
 60 \\
 \underline{56} \\
 40 \\
 \underline{35} \\
 50
 \end{array}$$

Jul 13-2:56 PM

Working without a calculator, when do we know for certain that $3/7$ repeats?

30

$$\begin{array}{r}
 0.42857 \\
 \hline
 7 \overline{) 3.000000000000} \\
 \underline{28} \\
 20 \\
 \underline{14} \\
 60 \\
 \underline{56} \\
 40 \\
 \underline{35} \\
 50 \\
 ?
 \end{array}$$

Jul 13-2:56 PM

Working without a calculator, when do we know for certain that $3/7$ repeats?

31

$$\begin{array}{r}
 0.42857 \\
 \hline
 7 \overline{)3.000000000000} \\
 \underline{28} \\
 20 \\
 \underline{14} \\
 60 \\
 \underline{56} \\
 40 \\
 \underline{35} \\
 50 \\
 \underline{49} \\
 ?
 \end{array}$$

Jul 13-2:56 PM

Working without a calculator, when do we know for certain that $3/7$ repeats?

32

$$\begin{array}{r}
 0.42857? \\
 \hline
 7 \overline{)3.000000000000} \\
 \underline{28} \\
 20 \\
 \underline{14} \\
 60 \\
 \underline{56} \\
 40 \\
 \underline{35} \\
 50 \\
 \underline{49} \\
 10
 \end{array}$$

Jul 13-2:56 PM

Working without a calculator, when do we know for certain that $3/7$ repeats?

33

$$\begin{array}{r}
 0.428571 \\
 \hline
 7 \overline{) 3.000000000000} \\
 \underline{28} \\
 20 \\
 \underline{14} \\
 60 \\
 \underline{56} \\
 40 \\
 \underline{35} \\
 50 \\
 \underline{49} \\
 10 \\
 \text{?}
 \end{array}$$

Jul 13-2:56 PM

Working without a calculator, when do we know for certain that $3/7$ repeats?

34

$$\begin{array}{r}
 0.428571 \\
 \hline
 7 \overline{) 3.000000000000} \\
 \underline{28} \\
 20 \\
 \underline{14} \\
 60 \\
 \underline{56} \\
 40 \\
 \underline{35} \\
 50 \\
 \underline{49} \\
 10 \\
 \underline{7} \\
 \text{?}
 \end{array}$$

Jul 13-2:56 PM

$ \begin{array}{r} 0.428571? \\ \hline 7 \overline{) 3.000000000000} \\ \underline{28} \\ 20 \\ \underline{14} \\ 60 \\ \underline{56} \\ 40 \\ \underline{35} \\ 50 \\ \underline{49} \\ 10 \\ \underline{7} \\ 30 \end{array} $	<p>35</p> <p>Working without a calculator, when do we know for certain that 3/7 repeats?</p>
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Jul 13-2:56 PM

$ \begin{array}{r} 0.4285714 \\ \hline 7 \overline{) 3.000000000000} \\ \underline{28} \\ 20 \\ \underline{14} \\ 60 \\ \underline{56} \\ 40 \\ \underline{35} \\ 50 \\ \underline{49} \\ 10 \\ \underline{7} \\ 30 \\ ? \end{array} $	<p>36</p> <p>Working without a calculator, when do we know for certain that 3/7 repeats?</p>
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Jul 13-2:56 PM

$ \begin{array}{r} 0.4285714 \\ \hline 7 \overline{) 3.000000000000} \\ \underline{28} \\ 20 \\ \underline{14} \\ 60 \\ \underline{56} \\ 40 \\ \underline{35} \\ 50 \\ \underline{49} \\ 10 \\ \underline{7} \\ 30 \\ \underline{28} \\ ? \end{array} $	<p>37</p> <p>Working without a calculator, when do we know for certain that 3/7 repeats?</p>
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Jul 13-2:56 PM

$ \begin{array}{r} 0.4285714? \\ \hline 7 \overline{) 3.000000000000} \\ \underline{28} \\ 20 \\ \underline{14} \\ 60 \\ \underline{56} \\ 40 \\ \underline{35} \\ 50 \\ \underline{49} \\ 10 \\ \underline{7} \\ 30 \\ \underline{28} \\ 20 \end{array} $	<p>38</p> <p>Working without a calculator, when do we know for certain that 3/7 repeats?</p>
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Jul 13-2:56 PM

$$\begin{array}{r}
 0.42857142 \\
 \hline
 7 \overline{) 3.000000000000} \\
 \underline{28} \\
 20 \\
 \underline{14} \\
 60 \\
 \underline{56} \\
 40 \\
 \underline{35} \\
 50 \\
 \underline{49} \\
 10 \\
 \underline{7} \\
 30 \\
 \underline{28} \\
 20
 \end{array}$$

Look at the remainders.

Working without a calculator, when do we know for certain that 3/7 repeats?

Jul 13-2:56 PM

$$\begin{array}{r}
 0.42857142 \\
 \hline
 7 \overline{) 3.000000000000} \\
 \underline{28} \\
 20 \\
 \underline{14} \\
 60 \\
 \underline{56} \\
 40 \\
 \underline{35} \\
 50 \\
 \underline{49} \\
 10 \\
 \underline{7} \\
 30 \\
 \underline{28} \\
 20
 \end{array}$$

Look at the remainders.

When you're bringing down zeros, if you get the same remainder twice, your decimal will start to repeat.

Working without a calculator, when do we know for certain that 3/7 repeats?

Jul 13-2:56 PM

$$\begin{array}{r}
 0.42857142 \\
 \hline
 7 \overline{) 3.000000000000} \\
 \underline{28} \\
 20 \\
 \underline{14} \\
 60 \\
 \underline{56} \\
 40 \\
 \underline{35} \\
 50 \\
 \underline{49} \\
 10 \\
 \underline{7} \\
 30 \\
 \underline{28} \\
 20
 \end{array}$$

39 Which of these could be remainders, when you are dividing by 7? Select all that could be remainders.

A	5	D	7
B	0	E	6
C	2	F	8

Jul 13-2:56 PM


$$\begin{array}{r}
 0.42857142 \\
 \hline
 7 \overline{) 3.000000000000} \\
 \underline{28} \\
 20 \\
 \underline{14} \\
 60 \\
 \underline{56} \\
 40 \\
 \underline{35} \\
 50 \\
 \underline{49} \\
 10 \\
 \underline{7} \\
 30 \\
 \underline{28} \\
 20
 \end{array}$$

40 How many different remainders are possible when you are dividing by 7?

Jul 13-2:56 PM

$ \begin{array}{r} 0.42857142 \\ \hline 7 \overline{) 3.000000000000} \\ \underline{28} \\ 20 \\ \underline{14} \\ 60 \\ \underline{56} \\ 40 \\ \underline{35} \\ 50 \\ \underline{49} \\ 10 \\ \underline{7} \\ 30 \\ \underline{28} \\ 20 \end{array} $	<p style="color: green;">When you're bringing down zeros, if you get the same remainder twice, your decimal will start to repeat.</p> <p style="color: purple;">When you are dividing by 7, there are only 7 possible remainders.</p>
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Jul 13-2:56 PM

$ \begin{array}{r} 0.42857142 \\ \hline 7 \overline{) 3.000000000000} \\ \underline{28} \\ 20 \\ \underline{14} \\ 60 \\ \underline{56} \\ 40 \\ \underline{35} \\ 50 \\ \underline{49} \\ 10 \\ \underline{7} \\ 30 \\ \underline{28} \\ 20 \end{array} $	<div style="text-align: right; margin-bottom: 10px;">  </div> <p>41 When dividing by 7, what is the largest number of digits you can get before it starts repeating?</p> <p style="color: green;">When you're bringing down zeros, if you get the same remainder twice, your decimal will start to repeat.</p> <p style="color: purple;">When you are dividing by 7, there are only 7 possible remainders.</p>
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Jul 13-2:56 PM

**42 Will this fraction become a repeating decimal?
(Think about what you just learned.)**

$$\frac{3}{17}$$

Yes

No



Jul 13-4:08 PM

43 What is the largest number of digits you could get before it started repeating?

$$\frac{3}{17}$$



Jul 13-4:08 PM

Fractions are Repeating Decimals

(with whole number
numerators and denominators)

Repeating Decimals are Fractions

(with whole number
numerators and denominators)

These numbers are rational numbers (ratio = fraction)

Jul 13-4:14 PM

Fractions are Repeating Decimals

(with whole number
numerators and denominators)

Repeating Decimals are Fractions

(with whole number
numerators and denominators)

These numbers are rational numbers (ratio = fraction)

Could this decimal be a rational number?

0.12112111211112111112111111211111121111111211111112111111112...

Jul 13-4:14 PM